This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

Botanical Laboratory
OF
HARVARD COLLEGE
FROM

TRANSFERRED
TO
HARVARD COLLEGE
LIBRARY

ed 1940.4.5

Botanical Laboratory
OF
HARVARD COLLEGE
FROM

TRANSFERRED
TO
HARVARD COLLEGE
LIBRARY

GEORGE TIEMANN & CO.'S

AMERICAN

ARMAMENTARIUM CHIRURGICUM.

Messrs. STOHLMANN & PFARRE take great pleasure in offering to the profession the present revised, augmented and supplemented edition of this work.

Practitioners of surgery, by consulting the following pages, will be assisted in the choice of the most approved instruments and appliances for the accomplishment of their purposes. Especially will this be the case with those gentlemen engaged in practice at distances remote from the facilities of obtaining information from personal observation, as well as from intercourse with their brethren of enlarged experience, which populous cities always afford.

Moreover, a drawing of an instrument imparts a more accurate conceptior of its construction, and consequently a clearer idea of its suitableness to the end proposed; or, the description, however precise, is at times imperfectly comprehended. A drawing often clears the obscurity.

In surgical works, the description of many instruments is often necessarily omitted — a mere reference being made to them — which impresses the uninformed inquirer with the conviction that there are many appliances which he might advantageously employ; or an ignorance of others, of still more recent introduction, may deprive him of means which, if placed in his hands, would enable him to effect the desired result.

A knowledge of these facts has induced the publication of the present volume, which, it is earnestly hoped, will meet the wants of the profession.

It is proposed from time to time to issue a supplement to the ARMAMENTARIUM; and those physicians and surgeons who desire to introduce new instruments are requested to communicate with the publishers,— that the inventions may be more thoroughly known, and drawings and descriptions inserted in the supplementary pages of the volume.

Med 1940.4.5

Botanical Laboratory
OF
HARVARD COLLEGE
FROM

TRANSFERRED
TO
HARVARD COLLEGE
LIBRARY

~~B4.1~~
~~B.Lab 9958.79~~
~~Bt a b. 5508.97~~
Med 1942.45

HARVARD COLLEGE
Feb 26. 1924
LIBRARY

Entered according to Act of Congress, in the year 1879, by
GEO. TIEMANN & CO.
in the Office of the Librarian of Congress, at Washington.

CHARLES H. LUDWIG, PRINTER,
10 & 12 READE STREET.

ALPHABETICAL INDEX.

	Page	Part
Abdominal Bandage	17	IV.
Belt	17, 18, 53	IV.
Supporter	9, 16	IV.
Abscess Knife	58	I.
Lancet	56	I.
Achilles, Tendo	28	IV.
Acoustic—Ear Trumpets, Stethoscopes, Tuning Fork		
Acoumeter	27	S.
Actual Cautery	100	III.
Acupressure Pin	38	I.
Acupuncture	38	I.
Trocar	123	III.
Adams' Hæmorrhoidal Syringe	125	III.
Rhinoplastos	3	S.
Subcutaneous Saw	3	S.
Subcutaneous Knife	3	S.
Adhesive Plaster	61, 80	IV.
Æsthesiometers	85, 86	I.
Agnew's Adjuster	115	III.
Canalicula Knife	10	II.
***Eye Case**	13	II.
Eye Douche	27	II.
Hernia Instrument	126	III.
Iridectomy Knife	30	II.
Lachrymal Syringe	6	II.
Perineum Case	116	III.
Perineum Needles	115	III.
Seizing Forceps	115	III.
Spring Tattoe	33	II.
Tattoeing Needle	33	II.
Air Pump	64 I., 112	IV.
and Receiver	89	II.
Alimentary	101	II.
Allen's Polypus Forceps	45	II.
Alligator Forceps, Urethral	45	III.
Allingham's Director	121	III.
Ligature Carrier	125	III.
Scissors	121	III.
Allis' Ether Inhaler	116	I.
Herniatome	11	S.
Allison's Differential Stethoscope	83	I.
Althoff's Iridectomy Scissors	30	II.
American Bullet Forceps	42	I.
American Scale, Urethral Instruments	5	III.
Amputating Cases	1	I.

	Page	Part
Amputating Cervix Uteri Scissors	81	III.
Saws	2	I.
Knives	4	I.
Scalpels	4	I.
Tenaculum	4	I.
and Trepanning Cases	3	I.
and Minor Operating Case	19	I.
Amusat's Hæmorrhoidal Clamp	121	III.
Anal Dilators	118, 119, 125	III.
Fissure Knives	121	III.
Instruments	117	III.
Specula	117, 118, 125	III.
Supporter	134	IV.
Anæsthetic	114	I.
Analysis, Graduates for	79	I.
Anatomical Models	130	I.
Syringe	94	I.
Anchylosis, Elbow Apparatus	23	IV.
Knee Apparatus	48, 49, 50	IV.
Andrew's Ankle-Joint Splint	121	IV.
Artery Forceps	44	I.
Elbow-Joint Splint	123	IV.
Knee-Joint Braces	122, 125	IV.
Knee-Joint Splint	124	IV.
Morbus Coxarius Apparatus	126	IV.
Pocket Case	53	I.
Searcher, Stone	31	III.
Spine Brace	127	IV.
Wrist Splint	123	IV.
Anell's Probe	6	II.
Eye Syringe	6	II.
Aneurismal	28	I.
Needle	6, 28, 61	I.
Angular Ear Hook	46	II.
Ear Probe	43	II.
Eye Needle	27	II.
Pile Needle	123	III.
Scissors	50	I.
Scissors	59	II.
Scissors	70, 124	III.
Ankle Compressor	130	IV.
Joint, Sayre's Apparatus	52	IV.
Splint, Andrew's	121	IV.
Weak, Brace for	27	IV.
Ani-Prolapsus Supporter	19	IV.
Animal Ligature	122	I.
Anterior Curvature Tibia Apparatus	37	IV.

---

* Sets of Instruments in Cases are indicated by **heavy-faced type.**

	Page	Part
Anterior Splint, Smith's	54	IV.
Antiseptic Sprays	119	I.
Sprays	6	S.
Surgery Materials	122	I.
Antrum Drill, Pope's	12	I.
Aponeurotome	42	III.
Apparitor Auris	13	S.
Applicators, Urethral	21	III.
Uterine	65, 73, 77, 82, 83	III.
Arm, Junod's, Dry Cupping	113	IV.
Armadillo, Voltaic	104	I.
Voltaic	50	IV.
Arm Sling	93	IV.
Splints	76, 79, 91, 92, 93, 94, 109, 110, 123, 130, 135	IV.
Armlets, Elastic	53	IV.
Arnold's Flexible Stethoscope	81	I.
Arterial	26	I.
Compressor	34	I.
Artery Constrictor, Speir's	26	I.
Artery Forceps	6, 26, 28, 30, 44	I.
Forceps	119	III.
Forceps	18	S.
Needles	28	I.
Scissors	48	I.
Artificial Eye	136	IV.
Hand	21	IV.
Leech	65	I.
Limb	107	IV.
Muscles	38	IV.
Nose	136	IV.
Arrow Extractor	2	S.
Ashton's Fenestrated Speculum	62, 117	III.
Perineum Needle	115	III.
Pile Clamp	119	III.
Aspirators	131	I.
Aspirators	30	III.
Aspirator, Fitch's Handy	14	S.
Uterine	2	S.
Atlee's Clamp	96	III.
Uterine Dilator	78	III.
Atomizers	87, 88, 89, 90, 91	II.
Atomizers	6, 12, 15, 19	S.
Aural	34	II.
Auricles	54	II.
Auscultation Instruments	81	I.
Resonator	9	S.
Auto-Insufflator	4	S.
Automatic Suture	5	S.
Autopsic	93	I.
Auzoux's Models	130	I.
Aveling's Polyptome	99	III.
Transfusion Apparatus	67	I.
Avery's Ear Forceps	47	II.
Awards	back of book.	
Axillary Thermometers	75	I.
Baader's Linear Knife	32	II.
Tattooing Needle	33	II.
Babcock's Pessary	86	III.
Bacon's Patella Support	135	IV.
Bachelder's Embryotomy Forceps	110	III.
Perforator	111	III.
Bag Ear Syringe	49	II.
Baker Brown's Clamp	97	III.
Ball's Double Hook	25	II.
Stem-Pessary	89	III.
Speculum Vaginæ	66	III.
Urethral Probe	11	III.
Uterine Dilator	78	III.
Uterine Dilator	13	S.
Ball and Socket Truss	13, 14	IV.
Bandage, Abdominal	17	IV.
Bulkley's Rubber	134	IV.
Esmarch's	119	IV.
Martin's Rubber	134	IV.
Roller	75	IV.
Rubber	134	IV.
Shears	103, 124, 133	IV.
Umbilical	9	IV.
Bank's Urethrotome	1	S.
Barnes' Wire Ecraseur	93	III.
Speculum Vaginæ	66	III.
Spirometer	98	II.
Uterine Dilators	77	III.
Barclay's Stethoscope	81	I.
Barker's Ointment Bougie	82	III.
Barwell's Attachments	38	IV.
Artificial Muscles	38	IV.
Clubfoot-Shoe	86	IV.
Bates' Psychrophor	17	S.
Urethrotome	18	S.
Bath, Eye	27	II.
Fumigation	48	III.
Hot Air	92	II.
Speculum	64	III.
Water	79	I.
Water, for the Arm and Forearm	115	IV.
Water, for the Lower Extremity	116	IV.
Battery, Caustic	112	I.
Electric	103	I.
Galvanic	100	I.
Bauer's Hip-Joint Apparatus	44	IV.
Wire Breeches	44	IV.
Baunscheidt's Lebenswecker	66	I.
Oil	66	I.
Bayonet Tooth Forceps	2, 3, 5, 6	V.
Baxter's Speculum	64	III.

Page Part
Baxter's Spray-Tube Cleaner ...... 122 I.
Beard's Base Needles ...... 111 I.
  Current Changer ...... 109 I.
  Electrodes ...... 105 I.
  Electrolysis Needle ...... 111 I.
  Piesmeter ...... 88 I.
  Stationary Electrode ...... 108 I.
Beaumont's Concealed Canalicula Knife ...... 10 II.
Beds, Fracture ...... 57, 97, 104 IV.
Bedford's Guarded Hook Crotchet .. 112 III.
  Obstetrical Forceps ...... 105 III.
  Obstetrical Case ...... 69 III.
  Perforator ...... 111 III.
Beer's Cataract Knives ...... 31 II.
  Cataract Needle ...... 33 II.
Bell's Ball Probe ...... 11 III.
  Urethral Sound ...... 11 III.
Belocq's Canula, Epistaxis ...... 58 II.
Belt ...... 17, 18 IV.
Benique's Case of Sounds ...... 4 III.
  Sound-Curve ...... 7 III.
Bennett's Posterior Nares Syringe .. 56 II.
Bergson's Steam Atomizer ...... 88 II.
Bethel Obstetrical Forceps ...... 108 III.
Biart's Speculum Vagina ...... 26 S.
Bicuspid Forceps, Dental ...... 2, 4 V.
Bigelow's Artery Forceps ...... 18 S.
  Catheter Syringe ...... 21 III.
  Evacuating Apparatus ...... 37 III.
  Evacuating Apparatus ...... 17 S.
  Lithotrite ...... 37 III.
  Lithotrite ...... 17 S.
Bigg's Bunion Apparatus ...... 39 IV.
  Short Leg Extension ...... 26 IV.
Bilroth's Artery Clamp ...... 26 I.
  Sounding Board ...... 31 III.
Bill's Arrow Forceps ...... 2 S.
Billing's Tonsilotome ...... 64 II.
Bisector, Wood's ...... 38 III.
Bistouries ...... 6 I.
Bistoury Caché, Civiale's ...... 25 III.
  Caché, Jaeger's ...... 10 II.
  Caché, Rectal ...... 121, 122 III.
  Ear ...... 44 II.
  Finger ...... 6, 46 I.
  Hernia ...... 6, 46, 56 I.
  Probe-pointed ...... 6, 46, 56 I.
  Sharp-pointed ...... 6, 46, 56 I.
  Staphylorrhaphy ...... 66, 67 II.
  Staphylorrhaphy ...... 10 V.
  and Tenotome ...... 61 I.
Bisulphate of Mercury ...... 101 I.
Bivalve Anal Specula ...... 118 III.
  Ear Speculum ...... 34 II.

Page Part
Bivalve Nasal Specula ...... 55 II.
  Vaginal Specula ...... 60, 66 III.
Blackman's General Operating Case ...... 7 I.
  Retractor ...... 20 I.
Bladder, Evacuating Apparatus .. 37, 44 III.
  Extrophy Apparatus ...... 47 III.
  Puncture ...... 30 III.
  Tapping ...... 30 III.
  Washing ...... 44 III.
Blake's Inner Ear Mirror ...... 44 II.
  Inner Ear Syringe ...... 47 II.
  Obstetrical Forceps ...... 106 III.
  Polypus Snare. ...... 45 II.
Blakeley's Resilient Speculum Vaginæ ...... 52 III.
Blanchet's Cataract Exhauster ...... 33 II.
Blandin's Bone Staff ...... 16 I.
  Fistula Knife ...... 121 III.
Bleeding Phlebotomy ...... 66 I.
Blitz's Extirpation Forceps ...... 25 II.
Blizard's Lithotomy Knife ...... 40 III.
Blood Transfusion Apparatus ...... 67 I.
Bloodless Operations, Esmarch's ... 119 IV
Blot's Perforator ...... 111 III
Blow-Pipe, Self-acting ...... 100 III
Blow-Pipe, Post Mortem ...... 95, 99 I
Blunt Gorget, Lithotomy ...... 39 III
Blunt Hook, Staphylorrhaphy ...... 10 V
  Hook, Trachea ...... 93 II
  Hook and Crotchet, Obstetrical ...... 112 III
Bodenhamer's Anal Fissure Knife .. 121 III
  Bistoury Caché ...... 122 III.
  Blandin's Knife ...... 121 III.
  Curvilinear Forceps ...... 123 III.
  Endoscope, Recto-Colonic ... 117 III.
  Fissure Knife ...... 121 III.
  Irrigator ...... 83, 118 III.
  Rectal Sounds ...... 118 III.
  Recto-Colonic Exploring Sound ...... 121 III.
  Reflector ...... 117 III.
  Spring Ligating Forceps .... 123 III.
Boisnot's Patella Splint ...... 70 IV.
Bolton's Pile Bougie ...... 125 III.
Bonafont's Catheter Holder ...... 37 II.
  Nasal Speculum ...... 57 II.
Bone (Osteotomy) ...... 8 I.
  Drills ...... 8 I.
  Exsecting Case ...... 31 I.
  Forceps ...... 6, 10, 12, 18, 22, 24 I.
Bones, Skeleton ...... 130 I.
Borated Cotton ...... 122 I.
Boot, Junod's, Dry Cupping ...... 112 IV.

	Page	Part
Boston Abdominal Supporter	18	IV.
Bottle, Patent, for Hypodermic Syringe	15	S.
Bougie, à Boule	9, 11	III.
à Trois Nœuds	9, 11	III.
Conique	9	III.
Conique à Ventre	9	III.
Filliform	9, 11	III.
Olivaire	9	III.
Olivaire à Ventre	9, 11	III.
Œsophageal	84	II.
Ointment	21	III.
Otis', à Boule	11	III.
Pile	124	III.
Rectal	117	III.
Urethral	9	III.
Bow Abdominal Supporter	16	IV.
Leg Brace	35	IV.
Pessary, Fowler's	23	S.
Saw	2	I.
Spring Truss	10	IV.
Umbilical Truss	9	IV.
Bowman's Cataract Exhauster	33	II.
Director	6	II.
Canalicula Knife	8	II.
Probes	6	II.
Stop-Needle	33	II.
Bozeman's Angular Scissors	70	III.
Angular Scalpel	68	III.
Button	72	III.
Button Adjuster	68	III.
Button Shaper	72	III.
Blunt Hook	68	III.
Case of Instruments	63	III.
Curved Scissors	70	III.
Depressor	68	III.
Dressing Forceps	74	III.
Double-Curved Scissors	71	III.
Duck-Bill Speculum	62	III.
Needles	72	III.
Needle Carriers	72	III.
Operating Chair	125	I.
Perineal Elevator	13	V.
Scalpels	68	III.
Scissors	70, 71	III.
Speculum Vaginæ	56	III.
Tenaculum	68	III.
Vaginal Support	18	S.
Vesico-Vaginal Fistula Case of Instruments	63	III.
Wire Adjuster	68	III.
Brace Trepan	20	I.
Brain Knife	95	I.
Brainard's Bone Drills	8	I.
Braun's Abdominal Supporter	18	IV.
Braun's Cephalotrite	114	III.
Colpeurynter	90	III.
Trephine Perforator	114	III.
Uterine Syringe	83	III.
Braxton Hick's Ecraseurs	92, 93	III.
Brewer's Speculum Vaginæ	58	III.
Briddon's Artery Compressor	36	I.
Bridge's Auto-Insufflator	4	S.
Nasal Douche	4	S.
Brickell's Obstetrical Case	69	III.
Obstetrical Forceps	107	III.
Perineal Stay	116	III.
Brigg's Lithotome	41	III.
Bristle Probang	83	II.
Probang	5	S.
Brush Holders	29, 84, 85	II.
Holders	121	III.
Bronchotomy, Tracheotomy	93	II.
Brown (see Braun).		
Brown's Clamp	97	III.
Pessary	14	V.
Spirometer	98	II.
Bruns' Bandage Shears	133	IV.
Epiglottis Pincette	82	II.
Brunton's Otoscope	34	II
Buck's Arterial Compressor	34	I.
Bistoury, Ear	44	II.
Chain-Saw Conductor	14	I.
Cotton Holder, Ear	44	II.
Curette, Ear	44	II.
Drills	8	I.
Drills	50	II.
Ear Case	46	II.
Ear Instruments	44	II.
Ear Nozzle	50	II.
Extension Apparatus	61	IV.
Fracture Apparatus	59	IV.
Furuncle Knife	44	II.
General Operating Case	5	I.
Mastoid Process Knife	44	II.
Maryngotome	44	II.
Pin Conductor	59	II.
Port Acid Glass	44	II.
Probe, Ear	44	II.
Rectum Trocar	30	III.
Sponge Holder	84	II.
Staff	29	III.
Suspension Apparatus	110	IV.
Tracheotomy Guide	93	II.
Throat Forceps	82	II.
Throat Lancet	82	II.
Weights and Pulleys	61	IV.
Budd's Obstetrical Case	69	III.
Obstetrical Forceps	104	III
Bull-Dog Artery Forceps	44	I

	Page	Part
Bull-Dog Forceps, for Gastric Fistula	99	I.
Bullet Forceps	40	I.
Instruments	40	I.
Probes	42	I.
Bulkley's Rubber Bandage	134	IV.
Bumstead's Canulated Forceps	45	II.
Case of Sounds	12	III.
Case of Urethral Instruments	12	III.
Holt's Dilators	24	III.
Lamp	48	III.
Maisonneuve's Urethrotome	26	III.
Retention Catheter	13	III.
Sound Curve	7	III.
Urethral Syringe	21	III.
Urethrotome	27	III.
P. P. Syringe	22	III.
Bunion Apparatus, Bigg's	39	IV.
Bunsen Burner	79	I.
Burette	78	I.
Mohr's	79	I.
Burge's Dilators	23, 24	III.
Fracture Apparatus	65	IV.
Throat Forceps	83	II.
Burnett's Mastoid Knife	50	II.
Burrall's Atomizer	12	S.
Burrow's Stethoscope	81	I.
Bush's Gorget	41	III.
Pile Needles	123	III.
Pile Scissors	124	III.
Butcher's Saw	6	I.
Buttle's Inhaler	39	II.
Gonorrhœa Syringe	22	III.
Pessary	88	III.
Scarificator	74, 80	III.
Tenaculum	74	III.
Uterine Case	53	III.
Buzzle's Obstetrical Forceps	103	III.
Byford's Clamp	95	III.
Byrd's Wire Gauze Splint	55	IV.
Byrne's Cautery Battery	100	III.
Double Spring Tenaculum	119	III.
Reflux Catheter	82	III.
Speculum Vaginæ	60	III.
Tenaculum Forceps	97	III.
Uterine Fixator	98	III.
Vulsellum	98	III.
Calculus, Urethral	45	III.
Vesical	31	III.
California Brush Holder	84	II.
General Operating Case	21	I.
Callender's Drainage Tube	101	III.
Calvarian Hook	95	I.
Cammann's Auscultators	82	I.
Campbell's Tumor Forceps	98	III.
Cane Ear Trumpet	54	II.
Canula, Epistaxis	58	II.
Gooche's	122	III.
Lachrymal	10	II.
Nasal Polypus	57	II.
Trachea	94, 95	II.
Capital Operating Case	3	I.
Operating Case	27	I.
Operating Case	29	I.
Saw	2	I.
Carbolized Cotton	122	I.
Gauze	122	I.
Ligature	122	I.
Oiled Silk	122	I.
Rubber Cloth	122	I.
Cardiometer	84	I.
Carey's Lever, Placenta	110	III.
Caries of Spine Apparatus	8	IV.
Caro's Nasal Clamp	56	II.
Vertebrated Catheter	13	III.
Carroll's Æsthesiometer	86	I.
Knot Tyer	28	I.
Knot Tyer	122	III.
Retroflexion Pessary	19	S.
Stethometer	84	I.
Vaccinator	66	I.
Carron de Villard's Eye Forceps	25, 26	II.
Eye Needle	27	II.
Cartilage Knife	6, 94, 99	I.
Carved Wood Splints	67	IV.
Casella's Thermometer	76	I.
Cataract Instruments	31	II.
Knives	31	II.
Needles	33	II.
Scissors	31	II.
Catarrhal Douche	90	II.
Syringe	56	II.
Catgut Ligature	122	I.
Catheters	13, 15, 18, 19, 20, 21	III.
Case of	16	III.
Compound	20	III.
Double Current	45, 82	III.
Eustachean	37	II.
Guages	3, 5, 6	III.
Holder	20	III.
Prostatic	18	III.
Rubber, Soft	18	III.
Sigmoid	68	III.
Syringes	21, 22	III.
Urethral	13	III.
Velvet Eye	11	S.
Vulcanized	16, 18	III.
Catling	4	I.
Cautery, Actual	100, 118	III.

	Page	Part
Cammann's Cardiometer	84	I.
Stethoscope	82	I.
Cautery, Ecraseur	100	III.
Electrodes	113	I.
Electrodes	32	S.
Galvano	112 I. 100	III.
Irons	100, 118	III.
Thermo	134	I.
Caustic Holders	50, 52	I.
Holders	45, 85	II.
Holders	20, 21, 74, 76, 82, 83, 120	III.
Probe	85	II.
Probe	76	III.
Syringe	21	III.
Cedar Stethoscope	81	I.
Cephalotrite	113, 114	III.
Ceratome (Keratome)	30	II.
Chadwick's Pterigium Scissors	29	II.
Chain Hook	94	I.
Saw	14	I.
Saw Carrier	14	I.
Chamber's Stem Pessary	77	III.
Chamberlain's Pessary	87	III.
Chapman's Nasal Spray	90	II.
Probe Sound	73	III.
Uterine Scarificator	80	III.
Charrière's Luxation Forceps	83	IV.
Stricture Cutter	26	III.
Tourniquet	32	I.
Chassaignac's Drainage Trocar	101	III.
Ecraseur	92	III.
Trachea Dilator	94	II.
Chase's Truss	12	IV.
Umbilical Truss	9	IV.
Cheatham's Ether Inhaler	117	I.
Cheek Retractors	66, 67	II.
Child's Brush	29, 85	II.
Caustic Case	85	II.
Children's Umbilical Trusses	10	IV.
Chisels	24, 95, 97	I.
Chisolm's Ether Inhaler	116	I.
Chloroform Inhaler	116	I.
Church's Tongue Depressor	63	II.
Cilia Forceps	2	II.
Cintrat's Ligator	93	III.
Circumcision, Phymosis	1	III.
Circular Saw, Graefe's	18	I.
Tiemann's	14	I.
Civiale's Bistoury Caché	25	III.
Lithotriptor	35	III.
Urethrotome	26	III.
Clamp, Harelip	59	II.
Nasal	56	II.
Ovariotomy	94	III.
Pile	121	III.
Clamp, Scrotal	46	III.
Clark's Fracture Splint	96	IV.
Clark's Nasal Douche	56	II.
Olecranon Splint	94	IV.
Otoscope	35	II.
Stethoscope	81	I.
Tooth-edged Scissors	81	III.
Clavicle, Dislocated	24	IV.
Fracture Apparatus	76, 91, 92	IV.
Sayre's Dressing	77	IV.
Clay's Powder Insufflator	86	II.
Powder Insufflator	84	III.
Cleborne's Pocket Instrument	14	S.
Double Forceps	26	S.
Tenaculum Needle, &c.	14	S.
Clearing Bladder of Debris	44	III.
Climax Uterine Dilator	78	III.
Clinical Thermometers	75	I.
Clover's Mouth Gag	60	II.
Clubfoot, Barwell's Attachments	38	IV.
Clubfoot-Shoe, Barwell's	86	IV.
Sayre's	30	IV.
Shaffer's	23	S.
Tiemann's	29	IV.
Clyster, Enema	120	III.
Coaptation Splints	67	IV.
Codman's Aspirator	133	I.
Cold and Heat, Application of	117, 120	IV.
Cold Sound, Psychrophor	12	S.
Coleman's Pessary	21	S.
Colle's Fracture Apparatus	79	IV.
Collin's Lamp	79	II.
Colonic Exploring Sound	121	III.
Colpeurynter	90	III.
Combination Supporter	132	IV.
Comedone Extractor	11	V.
Common Truss	13	IV.
Compact Amputating Case	1	I.
Field Case	57	I.
Minor Operating Case	37	I.
Operating Case	59	I.
Compound Catheter	52	I.
Catheter	20	III.
Compress, Arterial	34	I.
Seminal Cords	134	IV.
Comstock's Obstetrical Forceps	107	III.
Conant's Knife and Saw	4	I.
Operating Case	19	I.
Stem-Pessary	90	III.
Conical Steel Sounds	7	III.
Conjunctiva Instruments	29	II.
Contracted Wrist Apparatus	135	IV.
Constant Current Battery	100	I.
Constipation Tube, O'Biern's	101	II.
Conversation Tube	43, 53	II.

	Page	Part
Cooper's Clavicle Bandage	24	IV.
Hernia Knife	6, 56	I.
Hernia Knife	121, 126	III.
Coover's Splint, for Fractures of Arm and Hand	130	IV.
Cord Carrier, Obstetrical	105	III.
Seminal, Compress	134	IV.
Corn Instruments	12	V.
Knife	12	V.
File	12	V.
Corneal Instruments	29	II.
Section Knife	31	II.
Cornets, Ear	51	II.
Corradi's Dilator	23	III.
Couching Needle	27	II.
Counter-Extension Apparates	61, 83	IV.
Irritation Instrument	66	I.
Costotome, Chisel	95	I.
Shears	18	I.
Cotton Holder, Ear	44	II.
Lint, Von Brun's	56	IV.
Cowan's Vertebrated Catheter	13	III.
Cowhorn Tooth Forceps	3	V.
Coxeter's Artery Forceps	44	I.
Stem-Pessary	90	III.
Cradle, Salt's	96	IV.
Crampton's Artery Needles	26	I.
Craniotomy Forceps	113	III.
Cranioclast	113	III.
Critchet's Hooked Needle	31	II.
Lens Scoops	31	II.
Crosby's Pocket Case	51	I.
Crotchets, Obstetrical	112	III.
Croup Kettle	92	II.
Crown Trephine	12	I.
Crutches	85	IV.
Cupped Sound, Van Buren's	21	III.
Cupping, Bloody	64	I.
Cases of Instruments	64	I.
Cup	64	I.
Dry	112	IV.
Pump	64	I.
Curette (Spoon, Scoop), Bone	22	I.
Ear	44, 45	II.
Eye	27	II.
Forceps	13	V.
Rectal	120	III.
Siemon's	74	III.
Sims'	74	III.
Uterine	74	III.
Currie's Double Canulated Needle	20	S.
Curtis' Section Knife	91	I.
Curvature, Spine, Brace	2	IV.
Tibia, Brace	37	IV.
Curves, Proper, for Urethral Inst's.	7	III.
Cusco's Speculum Vaginæ	58	III.
Throat Forceps	82	II.
Tongue Forceps	63	II.
Cutisector, Piffard's	92	I.
Piffard's	11	V.
Cutter's Auto-Laryngoscope	78	II.
Pessary	86	III.
Ring-Pessary	91	III.
Cyrtometer, Flint's	84	I.
Cystitis Eyelet	14	V.
Cystocele Pessary, Skene's	18	S.
Cystotomes, Eye	31	II.
Darby's Bone Holder	24	I.
Chisels	24	I.
Clamp	95	III.
Compact Operating Case	59	I.
Gouge	24	I.
Levator	24	I.
Osteotome	24	I.
Rongeur	24	I.
Darling's Chain Hook	94	I.
Dissecting Case	96	I.
Scalpel	95	I.
Daviel's Curette	27	II.
Davies' Pessary	86	III.
Davis' Hernia Instrument	126	III.
Hip-Joint Splint	41	IV.
Obstetrical Forceps	105	III.
Spine Brace	8	IV.
Stethoscope	83	I.
& Kidder's Electric Machine	103	I.
Davidson's Syringe	82	III.
Dawson's Galvano-Caustic Battery	112	I.
Cautery Electrode	113	I.
Clamp, Ovariotomy	94	III.
Speculum Vaginæ	62	III.
Sims' Speculum	67	III.
Vaccinator	66	I.
Debris Evacuators	44	III.
Instruments	44	III.
Tube	44	III.
Decapitating Hook	112	III.
Deformity Apparatus		IV.
Delaborde's Tracheal Dilator	94	II.
De la Roza's Fixation Forceps	25	II.
Iris Needle	30	II.
Dennison's Absorbent Cotton	122	I.
Denison's Extension Windlass	118	IV.
Denman's Obstetrical Forceps	103	III.
Dental Instruments		V.
Depilator, Henry's	2	II.
Henry's	46	III.

	Page	Part
Depressor, Tongue	61	II.
Vaginal	68	III.
Depuytren's Bistoury Caché	41	III.
Enterotome	125	III.
Lithotomy Scalpel	40	III.
Splint	99	IV.
Dermatotomy	90, 92	I.
Dermatological	10, 11	V.
Desmarre's Cautery Iron	8	II.
Entropium Forceps	1	II.
Many-pronged Hook	8	II.
Paracentesis Trocar	29	II.
Eyelid Retractors	4	II.
Scarificator	8	II.
Trocar	29	II.
Désormeaux's Endoscope	2	III.
Detmold's Metacarpal Saw	12	I.
General Operating Case	21	I.
Devil's Screw-Hook	46	II.
Dewee's Placenta Hook	110	III.
Diagnostic Instruments	74	I.
Diapason	43	II.
Dick's Bougie à Boule	9	III.
Caustic Syringe	21, 83	III.
Dicken's Speculum Vaginæ	60	III.
Dieulafoy's Aspirator	131	I.
Aspirator	30	III.
Differential Stethoscope	83	I.
Dilators, Barnes	77	III.
Lithotrity	43	III.
Meatus Urinarius	2	III.
Œsophageal	84	II.
Rectal	118	III.
Sponge	14	V.
Steurer's	12	S.
Tracheal	93, 94	II.
Tupelo	11	S.
Urethral	23	III.
Uterine	77, 78, 79	III.
Uterine	13	S.
Vaginal	66	III.
Dionysius' Ear	53	II.
Dipper Ear Trumpet	52	II.
Directors	44, 61	I.
Directors	122	III.
Hernia	126	III.
Direct Light Concentrator	78	II.
Pressure Tourniquet	38	I.
Dislocation, Clavicle	24, 92	IV.
Phalanges	82	IV.
Pulleys	81	IV.
Radius et Ulna	93	IV.
Shoulder	24	IV.
Displacements, Uterine	85, 86	III.
Dissecting Cases	96	I.

	Page	Part
Dissecting Forceps	99	I.
Hooks	94	I.
Instruments	94	I.
Scissors	50	I.
Dittel's Elastic Ligature	125	III.
Division Catheter (double current)	45	III.
Divulsor, Anal	119	III.
Urethral	23	III.
Dix's Spud	27	II.
Dobell's Residual Air Pump	92	II.
Stethoscope	81	I.
Tongue Forceps	61	II.
Doisneau's Compress	134	IV.
Dolbeau's Dilator	43	III.
Guide for Lithoclast	39	III.
Lithoclast	39	III.
Dome Top Speculum	62	III.
Trocar	102	III.
Donder's Ear Spout	49	II.
Double Current Catheter	45, 82	III.
Hook, Operating	6	I.
Hook, Eye	25	II.
Inclined Plane Splint	67, 104	IV.
Rachitome	97	I.
Tenaculum	98	III.
Tenaculum Forceps	97, 98	III.
Douche, Catarrhal	90	II.
Ear	49, 50	II.
Eye	27	II.
Nasal	56, 57, 58	II.
Nasal	4	S.
Universal	102	II.
Vaginal	82, 84	III.
Dowell's Gorget	40	III.
Hernia Needle	126	III.
Speculum Vaginæ	62	III.
Staff	40	III.
Dowse's Self-Retaining Catheter	15	III.
Drainage Instruments	101	III.
Tubing	101	III.
Draper's Obstetrical Forceps	106	III.
Dressing Forceps, Pocket	50, 52	I.
Forceps, Uterine	74	III.
Forceps, Uterine	13	V.
Scissors, Pocket	52	I.
for Wounds	122	I.
Drills, Osteotomy	8, 14	I.
Mastoid Process	50	II.
Drop Glass, Eye	6	II.
Tube, Stoerk's	86	II.
Drum, for Testing Instruments	7	II.
Dry Cupping	81	III.
Cupping	112	IV.
Dissecting Knives	48	I.
Duchenne's Electrodes	106, 107, 108	I.

	Page	Part
Duchenne's Exploring Trocar	90	I.
Dudley's Fixation Forceps	25	II.
Cataract Scissors	31	II.
Needle Holder	16	S.
Ophthalmoscope	14	II.
Dugas' Abdominal Supporter	18	IV.
Caustic Case	50	I.
Dressing Case	47	I.
Pocket Case	47	I.
Dunster's Thermometer	75	I.
Duplay's Dilator	43	III.
Rhinoscope	58	II.
Durham's Seizing Forceps	63	II.
Trachea Canula	95	II.
Dynamograph	89	I.
Dynamometer	88	I.
Ear	34	II.
Apparitor Auris	13	S.
Cases of Instruments.. 36, 38, 40, 42, 46,	48	II.
Caustic Holder	45	II.
Cornets	51	II.
Curette	45	II.
Douches	49, 50	II.
Forceps	45	II.
Instruments	34	II.
Manometer	43	II.
Mirrors	34	II.
Piercer	34	II.
Polypus Forceps	47	II.
Probe	43, 44	II.
Powder Blower	49	II.
Specula	34	II.
Spoon	45	II.
Spouts	49	II.
Syringes	49	II.
Trumpets	51	II.
Ecraseurs	92	III.
Ecraseurs	5	S.
Cautery	113	I.
Cautery	100	III.
Laryngeal	84	II.
Echoscope, Speir's	83	I.
Edward's Caustic Holder	74	III.
Ecraseur	92	III.
Pessary	90	III.
Eiterbecken (Pus Basin)	49	II.
Elastic Belt	17	IV.
Caustic Holder	45	II.
Ligature	125	III.
Probe	121	III.
Stockings	53	IV.
Electric Batteries	100	I.
Disk	104	I.

	Page	Part
Electro-Surgery	111	I.
Therapeutic	100	I.
Electrodes	105	I.
Electrodes	32	S.
Care of	109	I.
Electrolysis	110	I.
Conductors	110	I.
Elbow, Anchylosis Apparatus	23	IV.
Splint, Andrew's	123	IV.
Splint, Hamilton's	91	IV.
Elevating Forceps, Dental	7	V.
Elevators, Root	9	V.
Trepanning	10, 14	I.
Uterine	75	III.
Ellinger's Uterine Dilator	79	III.
Elliott's Obstetrical Case	71	III.
Obstetrical Forceps	104	III.
Uterine Case	57	III.
Uterine Sound	76	III.
Elliottson's Stethoscope	81	I.
Ellis' Drainage Spiral	101	III.
Elsberg's Ear Hook	46	II.
Insufflator	85	II.
Nasal Speculum	55	II.
Pocket Laryngoscope	78	II.
Tongue Depressor	62	II.
Ely's Siegle's Otoscope	42	II.
Embalming	93	I.
Pump	93	I.
Embryotomy Instruments	110	III.
Emmett's Applicator	73	III.
Aspirator	132	I.
Counter-pressure Hook	13	V.
Curette Forceps	13	V.
Cystitis Eyelet	14	V.
Double Tenaculum	13	V.
Ecraseur	92	III.
Enucleator	13	V.
Fistula Tube	14	V.
Needle Forceps	13	V.
Ring Pessary	88	III.
Scissors	70	III.
Set of Instruments in a Pouch, on page 34, Price-List.		
Speculum Vaginæ	54	III.
Sponge Dilator	14	V.
Tenacula	57	III.
Twisting Forceps	13	V.
Trocar	101	III.
Uterine Dilator	78	III.
Uterine Elevator	75	III.
Uterine Knife	80	III.
Uterine Tourniquet	14	V.
Emplastrum Adhæsivum	78	IV.

	Page	Part
Enema Apparatus	84, 120	III.
Endermic, Hypodermic	70	I.
Endoscopes	2, 117	III.
Endoscopes	17	S.
English Sound Guage	6	III.
Enos' Minor Operating Case	35	I.
Enterotome	95	I.
Entropium Forceps	1	II.
Enucleator, Eye	25	II.
Emmett's	13	V.
Sims'	99	III.
Yarrow's	17	S.
Epiglottis Pincette	82	II.
Epilating Forceps, Piffard's	11	V.
Epistaxis Canula	58	II.
Clamp	56	II.
Tampon	56	II.
Erichson's Arterial Compressor	34	I.
Errors of Refraction, Apparatus	10	S.
Esmarch's Bandage Shears	133	IV.
Bandage Clamp	34	I.
Tourniquet	119	IV.
Ether Inhalers	114	I.
Eugene Abdominal Supporter	16	IV.
Eustachean Canal	39, 41	II.
Catheter	37, 43	II.
Catheter Holders	37	II.
Evacuating Apparatus, Bladder	37, 44	III.
Eversion, Feet, Apparatus	38	IV.
Eves' Minor Operating Case	35	I.
Excising Forceps, Dental	7	V.
Exhibition Pocket Case	49	I.
Expellers, Sponge Tent	73, 76	III.
Exploring Director	44	I.
Eustachean Canal	43	II.
Needle	90	I.
Trocar	90	I.
Trocar	48, 123	III.
Urethral	9	III.
Uterine	73	III.
Exsection (Osteotomy)	8	I.
Saws	14	I.
Case	31	I.
Extension, Short Leg	25, 26	IV.
and Counter-Extension	81, 118	IV.
External Urethrotomy	28	III.
Extirpation Forceps	25	II.
Extrophy of Bladder, Apparatus	47	III.
of Bladder, Apparatus	20	IV.
Eye, Artificial	136	IV.
Bath, Glass	27	II.
Cases of Instruments	3, 5, 7, 9, 11, 13, 24, 26, 28	II.
Douches	27	II.
Douches	12	S.
Eye, Fixation of	25	II.
Foreign Bodies in	27	II.
Gouge	27	II.
Instruments	1	II.
Knives	8, 10, 30, 31, 32, 33	II.
Lid Instruments	1	II.
Needles	27	II.
Specula	4	II.
Syringes	6	II.
Scissors	8, 12, 29, 30, 31, 33	II.
Trial-Cases	23	II.
Fahnestock's Tonsilotome	65	II.
False Joints, Apparatus	40, 107	IV.
Farabeuf's Osteophor	12	I.
Fauvel's Laryngeal Forceps	83	II.
Feeding Tubes	101	II.
Ferguson's Lion-Jaw Forceps	10, 22	I.
Lithotrite	34	III.
Mirror Speculum	62	III.
Sequestrum Forceps	10	I.
Stethoscope	82	I.
Tubular Speculum Vaginæ	52, 62	III.
Feet, Bones	130	I.
Eversion Apparatus	38	IV.
Flat, Apparatus	26	IV.
Fehlich's Flask	78	I.
Femur, Fracture Apparatus	55, 62	IV.
Ununited Fracture	40, 107	IV.
Fenestrated Artery Forceps	30	I.
Ear Scoop	45	II.
Lens Scoop	31	II.
Fever Thermometers	75, 76	I.
Fibula Fracture Apparatus	73, 99	IV.
Field Tourniquet	32	I.
Filiform Bougie	9, 11	III.
Filtration Apparatus	79	I.
Finger Brush Holder	84	II.
Knife (Bistoury)	6, 46	I.
Luxation Apparatus	82, 83	IV.
Protector	94	II.
Pad Truss	14	IV.
Sponge Holder	84	II.
Finnell's Knife and Saw	97	I.
Post Mortem Case	96	I.
Fischer's Iris Forceps	33	II.
Fisher's Phymosis Forceps	1	III.
Fistula Lachrymalis Knives	8, 10	II.
Tube, Emmett's	14	V.
Fitch's Abdominal Supporter	16	IV.
Aspirator Needles	102	III.
Clamp Forceps	102	III.
Dome Trocar	102	III.
Handy Aspirator	134	I.
Handy Aspirator	14	S.

	Page	Part
Fitch's Wire Twister	9	S.
Fixation, Eye-Ball	25	II.
Forceps	25	II.
Flat Foot Apparatus	26	IV.
Flexible Stethoscope	81	I.
Flint's Cyrtometer	84	I.
Percussor	82	I.
Physiological Case	97	I.
Pleximeter	82	I.
Trocar	102	III.
Urine Test Apparatus	77	I.
Folding Litter	85	IV.
Tongue Depressor	62	II.
Uterine Sound	76	III.
Vectis	105	III.
Folsom's Nasal Speculum	55	II.
Truss	15	IV.
Forceps, Alligator	45	III.
Arrow-Extracting	2	S.
Artery	6, 26, 28, 30, 44	I.
Artery	119	III.
Artery	18	S.
Bone-Cutting	6, 10, 18	I.
Bone-Holding	10, 12, 22, 24	I.
Bull-Dog	44, 99	I.
Bullet	40, 42	I.
Canulated	32, 45	II.
Caustic	74	III.
Cilia	2	II.
Clamp	30	I.
Clamp	96	III.
Conjunctiva	7	II.
Craniotomy	113	III.
Curvilinear	122	III.
Dental		V.
Depilating	2	II.
Depilating	46	III.
Dilating	78	III.
Dissecting	99	I.
Dressing	50, 52	I.
Dressing	74, 119	III.
Dressing	13	V.
Ear	45, 46, 47	II.
Embryotomy	110	III.
Entropium	1, 2	II.
Epiglottis	82	II.
Epilating	11	V.
Extirpation	25	II.
Eye	25	II.
Eyelet	37	II.
Fenestrated	30	I.
Fixation	25	II.
Gouge	12	I.
Gouging (Rongeur)	24	I.
Gouging (Rongeur)	50	II.
Forceps, Gullet, Throat	82, 83	II.
Hæmorrhoidal	121, 122	III.
Harelip	59, 60	II.
Iris	30, 32, 33	II.
Laryngeal	81, 82	II.
Lens	32	II.
Ligature	26	I.
Ligating	123	III.
Lithotomy	39, 41, 42	III.
Luxation	82, 83	IV.
Microscopic	92	I.
Midwifery	103	III.
Nail-Extracting	12	V.
Nail Nippers	12	V.
Nasal	57	II.
Necrosis	10, 12	I.
Needle-Holding	63	I.
Needle-Holding	10	II.
Needle-Holding	68, 72, 123	III.
Needle-Holding	13, 14	V.
Needle-Holding	5, 26	S.
Needle	32	II.
Obstetrical	103, 105	III.
Obstetrical	1, 13	S.
Phymosis	1	III.
Pile	119	III.
Placenta	110	III.
Polypus	45, 57	II.
Polypus	98, 99	III.
Punching	81	III.
Rongeur	24	I.
Rongeur	50	II.
Root	4, 5, 6	V.
Sac	96, 97	III.
Saw	113	III.
Seizing	63, 66, 67	II.
Seizing	68, 115	III.
Sequestrum	10, 24	I.
Sequestrum	12	V.
Shrimpton	96	IV.
Slide-catch	44	I.
Slide-catch	119	III.
Spring-catch	30, 44	I.
Spicula	7	V.
Splitting	7	V.
Sponge	68	III.
Self-holding	30	I.
Strabismus	12	II.
Tenaculum	26	I.
Tenaculum	63	II.
Tenaculum	98	III.
Tenaculum	14	S.
Throat	82, 83	II.
Tissue	96	III.
Tongue	61, 63	II.

Page Part

- Forceps, Tooth 1 V.
  - Torsion 28, 30, 54 I.
  - Torsion 94 III.
  - Tracheal 94, 95 II.
  - Trepanning 24 I.
  - Trichiasis 2 II.
  - Twisting 66 II.
  - Twisting 68 III.
  - Twisting 13 V.
  - Twisting 9 S.
  - Urethral 45 III.
  - Universal Tooth 4 V.
  - Universal Tracheal 94 II.
  - Uterine 74 III.
  - Vulsellum 63, 64 II.
  - Vulsellum 98 III.
  - Wire Cutting 63 I.
  - Wire Twisting 68 III.
  - Wire Twisting 13 V.
  - Wire Twisting 9 S.
  - Wisdom 2 V.
- Foreign Bodies, Ear 45, 46, 47, 49, 50 II.
  - Bodies, Eye 27 II.
- Forearm, Ununited Fracture 109 IV.
- Four-bladed Pocket Instrument 60 I.
- **Four-fold Pocket Case** 41, 47 I.
- Foster's Operating Table 125 I.
- Fountain Syringe 102 II.
- Fowler's Pessary 91 III.
  - Bow Pessary 23 S.
- Fox's Clavicle Apparatus 77, 91 IV.
- Fracture Apparatus 54 IV.
  - Arm and Forearm Apparatus, 94 IV.
  - Beds 57, 97, 105 IV.
  - Colle's, Apparatus 79 IV.
  - Clavicle Apparatus 76, 91, 92 IV.
  - Dressing, new 67 IV.
  - Elbow Apparatus 91 IV.
  - Femur Apparatus 58 IV.
  - Fibula Apparatus 73 IV.
  - Humerus, Neck 92 IV.
  - Lower Maxillary 75 IV.
  - Olecranon 94 IV.
  - Patella 68 IV.
  - Tibia 73 IV.
  - Ununited, Apparatus 21, 40, 106, 107, 108, 109 IV.
- Frænum Probe 1 III.
  - Spatula 1 III.
- Fraenkel's Nasal Speculum 55 II.
  - Pneumatic Apparatus 98 II.
- Frazer's Pessary 88 III.
- French Adjustable Truss 12, 14 IV.
  - Sound Guage 6 III.
  - Truss 11 IV.

Page Part

- French's Speculum Vaginæ 56 III.
- Fryer's Addition to Sims' Speculum, 28 S.
  - Sims' Speculum 12 S.
  - Speculum Vaginæ 51 III.
  - Transfusion Apparatus 68 I.
- **Fuller's Pocket Medicine Cases** 126 I.
- Fullgraff's Eustachean Spray 41 II.
  - Laryngeal Douche 87 II.
  - Nasal Douche 58 II.
  - Powder Blower 87 II.
  - Posterior Nares Douche 87 II.
- Fumigation, Mercurial, Apparatus 48 III.
- Funis Clamp, Pulling's 110 III.
- Furuncle Knife 44 II.

- Gags 60 II., 16 S.
- **Gaiffe's Battery** 101 I.
- Gaine's Needle Holder 5 S.
- Galante's Eye Speculum 4 II.
- Galt's Trephine 12 I.
- **Galvanic Batteries** 100 I.
  - Belts 104 I.
  - Disks 104 I.
  - Pessaries 107 I.
- Galvano-Cautery Apparatus 111 I.
  - Cautery Sling 113 I.
  - **Faradic Machine** 102 I.
- Galezowsky's Canalicula Dilator 6 II.
- Gardner's Caustic Holder 74 III.
  - Caustic Forceps 74 III.
  - Manifold Instrument 75 III.
  - **Uterine Case** 55 III.
- Garratt's Electric Disk 104 I.
- **Garrique's Transfusion Apparatus** 69 I.
- Gastric Fistula Tube 99 I.
- Gauze, Antiseptic 122 I.
- **Gay's Pocket Case** 53 I.
  - Open Ring Scissors 60 I.
- **General Operating Cases** 5, 7, 9, 11, 13, 15, 17, 21, 23, 25, 55, 59 I.
- Gendron's Trachea Canula 95 II.
- George's Ether Inhaler 117 I.
  - Ether Inhaler 16 S.
- German Student's Lamp 76 II.
  - Truss 12 IV.
- Gerne's Pleximeter 82 I.
- Genu-Valgum Brace 36, 131 IV.
- Gensoul's Cautery Canula 8 II.
- Gibb's Laryngeal Ecraseur 84 II.
  - Spray 86 II.
- Gibson's Ligature Instrument 124 III.
- Gidding's Uterine Sound 76 III.
- Gillette's Obstetrical Forceps 109 III.
- Girard Teulon's Canaliculatome 11 II.

	Page	Part
Glass Brush	122	III.
Meatoscope	11	III.
Globe Pessary	88	III.
Glove, Paralysis	23	IV.
Glover's Evacuating Apparatus	44	III.
Gnawing Forceps	24	I.
Gorgets	39, 40, 41, 42	III.
Anal Speculum	117	III.
Gonorrhœa Ring	7	III.
Syringes	22	III.
Gouge, Bone	24	I.
Eye	27	II.
Gouging Forceps	24	I.
Gouley's Beaked Bistoury	29	III.
Director	29	III.
Divulsor	23	III.
Dilating Urethrotome	27	III.
External Urethrotomy Instruments	29	III.
Guides, Whalebone	11	III.
Hydro-Hæmostat	43	III.
Lithoclasts	43	III.
Metrical Sound-Guage	3	III.
Over-Distender	23	III.
Searcher for Stone	31	III.
Sounds, Case	3	III.
Staff Catheter	29	III.
Stricture Cases	10	III.
Tenaculum.	29	III.
Tunnelled Sound	11	III.
Tunnelled Urethrotomes	25, 26	III.
Whalebone Guide	29	III.
Gooche's Canula	122	III.
Goodwillie's Levators	20	I.
Levators	67	II.
Mouth Gag	60	II.
Nasal Speculum	55	II.
Oral Saw	67	II.
Speculum Oris	61	II.
Spicula Forceps, Dental	7	V.
Splitting Forceps, Dental	7	V.
Tooth Forceps	7, 8	V.
Graduated Measure, Glass	78	I.
Tube, for Analysis	79	I.
Graefe's Circular Saw	18	I.
Eye Speculum	4	II.
Fixation Forceps	25	II.
Iris Forceps	30	II.
Lens Scoop	31	II.
Linear Knife	31	II.
Tractor	31	II.
Graeve's Speculum Vaginæ	51	III.
Grafting, Skin, Scissors	11	V.
Graily Hewitt's Pessary	88, 89, 91	III.
Grant's Œdema Glottis Instrument	80	II.
Granger's Sponge Holder	84	II.
Grappling Forceps, Piffard's	11	V.
Hook	94	I.
Green's Double Hook	64	II.
Hypodermic Case	72	I.
Tongue Depressor	62	II.
Tonsil Bistoury	64	II.
Plaster Machine	13	S.
Greenhalg's Tumor Forceps	97	III.
Greenslade's Canalicula Knife	10	II.
Greensville Dowell's Speculum	62	III.
Gross' Artery Compressor	30	I.
Artery Compressor	42	III.
Bullet Forceps	42	I.
Ear Spoon and Hook	46	II.
Flexible Catheter	20	III.
Pocket Case	45	I.
Polypus Forceps	57	II.
Speculum Oris	60	II.
Tourniquet	32	I.
Urethral Dilator	20	S.
Urethrameter	19	S.
Urethrotome	25	III.
Gruber's Ear Specula	35	II.
Ear Scissors	44	II.
Polypus Knife	37	II.
Tympanitome	38	II.
Guarded Blunt Hook and Crotchet.	112	III.
Crown Trephine	20	I.
Guages, Catheter &c	3, 5, 6	III.
Gueride's Clamp	94	III.
Guernsey's Uterine Elevator	75	III.
Guides, Gouley's	11	III.
Keyes'	18	III.
Otis'	18	III.
Guillotine, Tonsil	65	II.
Uvula	64	II.
Gum Lancets	58	I.
Lancets	9	V.
Gun-Shot, Fracture Apparatus	62	IV.
Gunn's Pocket Case	43	I.
Gutta Percha Splint	67, 91	IV.
Gynæcological Instruments	50	III.
Instrument Bag	50	III.
Hackley's Eustachean Spray	41	II.
Hæmostatic	87	IV.
Hæmorrhoidal Clamp	119	III.
Instruments	121	III.
Syringe	125	III.
Hæmarheumoscope	88	I.
Hale's Obstetrical Forceps	108	III.
Hall's Iris Scissors	33	II.
Hammer, Osteotomy	24	I.
Percussion	82	I.

	Page	Part
Hammer, Post Mortem	97	I.
Toe, Apparatus	39	IV.
Hamilton's Artery Forceps	30	I.
Bone Cutter	10	I.
Bone Drills	8	I.
Bullet Forceps	42	I.
Case, Operating	9	I.
Director Probe	42	I.
Drills	8	I.
Dry Dissectors	48	I.
Dynamometer	89	I.
Elbow Splint	91	IV.
General Operating Case	9	I.
Harelip Scissors	59	II.
Hip-Joint Splint	43	IV.
Levator	6	I.
Maxillary Bandage	75	IV.
Osteophor	12	I.
Patella Splint	71	IV.
Pocket Case	45	I.
Revulsor	117	IV.
Serrated Bone Cutter	10	I.
Sequestrum Forceps	10	I.
Tonsilotome	65	II.
Hammond's Æsthesiometer	85	I.
Hand, Artificial	21	IV.
Bones of	130	I.
Gouge	50	II.
Trepan	20	I.
Prince's	22	IV.
Handy Aspirator	14	S.
Hank's Antiseptic Spray	119	I.
Antiseptic Spray	6	S.
Atomizer for Throat	19	S.
Galvanic Pessary	107	I.
Pessary	88	III.
Rapid Dilators	21	S.
Tenaculum Forceps	2	S.
Tracheotome	94	II.
Tracheotome	6	S.
Uterine Dilators	77	III.
Harelip Clamps	59	II.
Forceps	59	II.
Instruments	59	II.
Pin	59, 60	II.
Scissors	59	II.
Harris' Fracture Apparatus	99	IV.
Tooth Forceps	3, 4	V.
Trocar	47	III.
Harrison's Pessary Catheter	20	III.
Hartshorn's Patella Splint	70	IV.
Hart's Eye Speculum	4	II.
Hassenstein's Otoscope	36	II.
Hawksley's Stethoscope	81	I.
Thermometer	75	I.

	Page	Part
Hayes' Knife-Needle	32	II.
Haywood Smith's Scissors	80	II.
Scissors	70	III.
Head-Rest for Torticollis	14	S.
Heat and Cold, Alternate, Application of	117, 120	IV.
Hebra's Bone Scoop	22	I.
Heine's Saw	22	I.
Heister's Speculum Oris	61	II.
Helical Needle	28	I.
Needle	115, 123	III.
Helmuth's Pocket Case	51	I.
Hemiplegia Apparatus	34	IV.
Henry's Bull's-Eye	68	II.
Depilating Forceps	2	II.
Depilating Forceps	46	III.
Phymosis Forceps	1	III.
Scrotal Clamp	46	III.
Bandage Shears	66	IV.
Hernia Director	44, 48	I.
Director	126	III.
Needles	126	III.
Instruments	126	III.
Syringe	126	III.
Trusses	9	IV.
Herniatome, Allis'	11	S.
Hess' Glass Pleximeter	11	V.
Heuel's Antiseptic Spray	121	I.
Heurteloup's Artificial Leech	65	I.
Lithotrite	34	III.
Hewitt's Colle's Fracture Splint	79	IV.
Femur Fracture Apparatus	58	IV.
Knife	29	III.
Pessary	88, 89, 91	III.
Staff	29	III.
Hewson's Torsion Forceps	30	I.
Hey's Saw	12	I.
Hick's Ecraseur	92, 93	III.
Higgin's Aspirator	133	I.
Hinge Hernia Director	126	III.
Hinton's Polypus Forceps	47	II.
Hip-Joint Splints	41, 43, 44, 47, 88, 89, 111	IV.
Hitchcock's Anteversion Pessary	89	III.
Hodge's Obstetrical Case	71	III.
Obstetrical Forceps	103	III.
Pessary	89	III.
Hodgen's Fracture Apparatus	73	IV.
Suspension Apparatus	80	IV.
Hoff's Automatic Suture	5	S.
Hoffman's Gouge Forceps	12	I.
Pessary	88	III.
Holden's Resonator	9	S.
Sphygmograph	87	I.
Holmes' Perforator	111	III.

	Page	Part
Holt's Divulsors	23	III.
Self-Retaining Catheter	15, 18	III.
Holthouse's Spiral Extender	89	IV.
Hose, Elastic	53	IV.
Hooked Gorget	42	III.
Hook, Tonsil	64	II.
Hooper's Knee Extension Apparatus	41	IV.
Horseshoe-pad Truss	134	IV.
Hornby's Pessary	86	III.
Speculum Vaginæ	52	III.
Hosner's Ear Spout	50	II.
Hospital Aspirator	131	I.
Minor Operating Case	37	I.
Pocket Case	43	I.
Splint, Lente's	62	IV.
Hot Air Bath	92	II.
Water Bath	115, 116	IV.
Water, in Surgery	114	IV.
Howard's Bone Drills	8	I.
Speculum Vaginæ	64	III.
Huter's Flat Catheter	20	III.
Hull's Truss	13	IV.
Humerus, Neck Fracture	92	IV.
Ununited Fracture	109	IV.
Ununited Fracture	21	IV.
Hunter's Artery Forceps	44	I.
Director	44	I.
Divulsor and Urethrotome	22	S.
Filamentous Wedge	22	S.
Inhaler	91	II.
Obstetrical Forceps	106	III.
Speculum Vaginæ	58	III.
Trilabe	34	III.
Urethral Tourniquet	22	S.
Urethrotome	22	S.
Uterine Dilator	79	III.
Uterine Sound	76	III.
Hurd's Pessary	90	III.
Hutchison's Prostatic Catheter	15	III.
Harelip Forceps	59	II.
Hip-Joint Apparatus	47	IV.
New Method for Treating Joint Disease	29	S.
Lithotome	41	III.
Lithotome	10	S.
Ligature Needle	123	III.
Ointment Syringe	82, 120	III.
Post Mortem Case	96	I.
Prepuce Forceps	1	III.
Hutchinson's Spirometer	98	II.
Hydrocele Bag	46	III.
Trocars	46, 47, 48	III.
Hydro-Rheostat	104	I.
Hypodermic Bottle	73, 74	I.
Bottle	15	S.

	Page	Part
Hypodermic Syringes	70	I.
Syringe Needles	72	I.
Syringe, Repairing	73	I.
Hysterotomes	80	III.
Ice Bags, Eye	121	IV.
Spinal	120	IV.
Injection, Bladder	49	III.
Hypodermic	70	I.
Rectum	120	III.
Uterus	82, 83	III.
Vaginæ	82, 84	III.
Illuminators	78, 79	II.
Illuminators	117	III.
Incontinence, Urinals	47	III.
Urinals	20	IV.
Inhaler, Anæsthetic	114	I.
Anæsthetic	16	S.
Inhaling Apparatus	88	II.
Insufflators, Bridge's	4	S.
Clay's	86	II.
Elsberg's	85	II.
Knapp's	49	II.
Laryngeal	86	II.
Leffert's	86	II.
Rectal	119	III.
Sexton's	6	S.
Insulated Catheter	107	I.
Internal Urethrotomy Instruments	25, 26, 27, 28	III.
Interosseous Saw, Lente's	14	I.
Intra-Uterine Electrode	106	I.
Iris Instruments	30	II.
Forceps	30, 32	II.
Hooks	30	II.
Knives	32, 33	II.
Needles	30	II.
Scissors	30, 31, 32, 33	II.
Iridotomy Scissors	31	II.
Irido Platinum Needle	11	V.
Irrigators	83, 118	III.
Isaac's Bone Forceps	18	I.
Ive's Obstetrical Forceps	106	III.
Jacobson's Lithotrite	34	III.
Jacket, Straight	113	IV.
Jaeger's Bistoury Caché	10	II.
Keratomes	30	II.
Lid Holder (Plate)	1	II.
Ophthalmostate	25	II.
Plate Lid Holder	1	II.
Jaque's Catheters	11	S.
Jaw, Fracture Apparatus	75	IV.
Lock	60	II.
Jeffrey's Respirator	91	II.

	Page	Part
Jenk's Obstetrical Forceps	108	III.
Speculum Vaginæ	51	III.
Uterine Probe	71	III.
Uterine Sound	78	III.
Jewett's Section Cutter	91	I.
Johnson's Electric Monitor	103	I.
Trachea Canula	95	II.
Junker's Methylene Inhaler	118	I.
Junod's Arm, Dry Cupping	113	IV.
Boot, Dry Cupping	112	IV.
Jury Mast, Sayre's	129	IV.
Keith's Tenaculum	42	III.
Kettle, Croup	92	II.
Keratomes	30	II.
Keratome Scissors	31	II.
Key, Dental	8	V.
Keye's Bladder Washer	49	III.
Catheter Guide	18	III.
Kidder's Family Battery	103	I.
Tip Battery	102	I.
King's Pelvimeter	14	V.
Kinloch's Pessaries	89	III.
Urethrotome	11	S.
Knapp's Caustic Holder	29	II.
Cystotome	31	II.
Ear Specula	35	II.
Entropium Forceps	2	II.
Eye Cases	24, 26	II.
Foreign Body Hook	27	II.
Ophthalmoscopes	22, 23	II.
Operating Chair	123	I.
Powder Blower	49	II.
Knee, Anchylosis, Apparatus	41, 48, 49, 50	IV.
Cap	53	IV.
Cap, Patella	72	IV.
Compressor	130	IV.
Knee-Joint Splints :		
Anchylosis, short	49	IV.
Anchylosis, long	50	IV.
Andrew's	122, 123, 124	IV.
Bacon's, Patella	135	IV.
Holthouse's Extender	89	IV.
Hooper's Extension	41	IV.
Hutchison's	29	S.
Sayre's	51	IV.
Shaffer's	90	IV.
Stillman's	30	S.
Knife, Amputating	4	I.
Brain	95	I.
Cataract	31	II.
Cartilage	6, 94, 99	I.
Iris	32	II.
Linear	31, 32	II.

	Page	Part
Knife, Microscopic Section	91	I.
Needle	32	II.
Uterine	74	III.
Knight's Stethoscope	83	I.
Knock-Knee Brace	36, 131	IV.
Knot Tyer	28	I.
Tyer	122	III.
Knotted Bougie	11	III.
Kramer's Catheter Holder	37	II.
Ear Speculum	34	II.
Syringe	49	II.
Kuechenmeister's Scissors	81	III.
Kystotome (Cystotome)	31	II.
Labia Vaginæ, Speculum	66	III.
Lachrymal Canula	10	II.
Duct Instruments	4, 6, 8, 10	II.
Probes	6	II.
Syringes	6	II.
Laenneck's Uterine Knives	80	III.
Lallemand's Port Caustique	21, 82	III.
Lamp, Bodenhamer's	117	III.
Bumstead's	48	III.
Collin's	79	II.
Henry's	68	II.
Mackenzie's	78	II.
Lee's	48	III.
Maury's	48	III.
Pocket Illuminator	79	II.
Seeger's	76	II.
Tobold's	76	II.
Van Buren's	48	III.
Lancet, Abscess	56	I.
Bleeding	56	I.
Gum	58	I.
Gum	9	V.
Spring	66	I.
Thumb	56	I.
Langenbeck's Artery Forceps	6	I.
Bone Hook	10	I.
Bandage Clamps	34	I.
Levator and Hook	10	I.
Retractor	67	II.
Serres-fins	30	I.
Seizing Forceps	63	II.
Staphylorrhaphy Instruments	67	II.
Suture Holder	67	II.
Trachea Hooks	93	II.
Tracheotome	93	II.
Uraniscoplastic Instruments	67	II.
Lanné's Forcep Needle	32	II.
Laryngeal Caustic Carrier	85	II.
Forceps	82	II.
Powder Blower	86	II.
Scoop	83	II.

	Page	Part
Laryngeal Syringe	56, 86	II.
Laryngoscope	68	II.
on the Use of the	70	II.
Laryngoscopic Cases	75	II.
Instruments	68 to 86	II.
Mirrors	68	II.
Lateral Curvature, Spine, Apparatus	3, 135	IV.
Laurence's Eyelid Tourniquet	1	II.
Laveur's Endoscope	2	III.
Lawson's Applicator	83	III.
Lebenswecker, Baunscheidt's	66	I.
Leech, Artificial	65	I.
Uterine	2	S.
Lee's Lamp	48	III.
Leffert's Powder Blower	86	II.
Leg, Short, Extension	25, 26	IV.
and Thigh, Paralysis	33	IV.
Legs, Weak, Apparatus	32	IV.
Lente's Caustic Probe	85	II.
Double-Bulb Probe	76	III.
Ether Inhaler	114	I.
Fracture Apparatus	62	IV.
Interosseous Saw	14	I.
Ligature Carrier	123	III.
Ointment Syringe	82, 83	III.
Platina Cup	76, 122	III.
Lens Forceps	32	II.
Scoops (Spoons)	31	II.
Lenticular Knife	4	I.
and Elevator	14	I.
Leonard's Uretrometric Sound	28	S.
Leroy d' Etiolle's Scoop	45	III.
Levator	6	I.
Levis' Cataract Needle	33	II.
Clavicle Apparatus	76	IV.
Dislocation Splint	82	IV.
Hernia Director	126	III.
Lachrymal Probe	7	II.
Lewis' Folding Saw	12	I.
Patella Splint	69	IV.
Urine Test Apparatus	80	I.
Varicocele Clamp	46	III.
Lid, Entropium	1	II.
Liebold's Eye Speculum	4	II.
Subpalpebral Syringe	6	II.
Liebreich's Eye Speculum	4	II.
Iris Forceps	32	II.
Ophthalmoscope	13	II.
Probe and Knife	7	II.
Lifting-Back Saw	14, 99	I.
Ligators	26, 28	I.
Ligators	92, 93, 122, 123, 124, 125	III.
Ligature, Elastic	125	III.
Needle	28	I.

	Page	Part
Ligature, Silk	16	I.
Lincoln's Cautery Electrode	32	S.
Linear Knife, Baader's	32	II.
Knife, Graefe's	31	II.
Linhardt's Knife Chisel	24	I.
Lining Splints	67	IV.
Lint	56, 73	IV.
Carrier	42	I.
Liquid Glass, Surgical, Use of	106	IV.
Lister's Antiseptic Dressing	122	I.
Liston's Amputating Knife	4	I.
Artery Forceps	6	I.
Bone Forceps	10	I.
Fracture Apparatus	66	IV.
Lithoclast	39, 43	III.
Litholapaxy, Bigelow's Apparatus	36	III.
Lithotomy	38	III.
Anklets and Wristlets	38	III.
Cases	14, 16, 17	III.
Forceps	39, 41, 42	III.
Gorgets	39, 41, 42	III.
Knives	40, 41	III.
Scoop	39	III.
Staffs	38	III.
Lithotome, Hutchison's	10	S.
Smith's N. R.	40	III.
Lithotrites	32	III.
Lithotrity	32	III.
Little's Antiseptic Spray	121	I.
Director, for Median Lithotomy	38	III.
General Operating Case	55	I.
Lithotomy Bistoury	40	III.
Lithotomy Case	17	III.
Lithotomy Forceps	42	III.
Lithotomy Staff	38	III.
Minor Operating Case	55	I.
Minor Operating Instrument	48	I.
Pocket Case	51	I.
Retractors	48	I.
Scalpels	48	I.
Searcher, Stone	31	III.
Staff	38	III.
Trocar	48	III.
Litter	85	IV.
Local Anæsthesia	119	I.
Lock-Jaw Instrument	61	II.
Loewenthal's Obstetrical Forceps	104	III.
Loomis' Stethoscope	81	I.
London Abdominal Supporter	17	IV.
Long Chain Ecraseur	93	III.
Pipe Urethral Syringe	21	III.
Pipe Uterine Syringe	82	III.
Loring's Ophthalmoscopes	14	II.
Lower Extremities, Apparatus	25	IV.

	Page	Part
Lucae's Reflux Ear Douche	49	II.
Luer's Cheek Retractors	66	II.
Lithotomy Scoop	40	III.
Luxation Forceps	82	IV.
Polypus Forceps	98	III.
Lusk's Cephalotrite	113	III.
Luzardi's Hooked Needle	31	II.
Luxation, Phalanges	82, 83	IV.
Mackenzie's Inhaler	92	II.
Laryngeal Ecraseur	81	II.
Laryngeal Electrode	108	I.
Laryngeal Forceps	81	II.
Laryngeal Lancets	80, 81	II.
Laryngeal Scissors	81	II.
Light Concentrator	78	II.
Tonsilotome	65	II.
Magneto-Electric Batteries	103	I.
Mallet, Steel	97	I.
Lead-filled	24	I.
Mallez's Bougie à Boule	9	III.
Insufflator	9	III.
Manfredi's Speculum	7	II.
Manoir's Canalicula Scissors	8	II.
Manometer, Politzer's	43	II.
Marey's Sphygmograph	87	I.
Markoe's General Operating Case	17	I.
Sequestrum Forceps	24	I.
Staff, Lithotomy	38	III.
Torticollis Brace	6	IV.
Marshall's Osteotrite	22	I.
Marsh's Respirometer	27	S.
Marine Lint	82	IV.
Martin's Combination Stethoscope	82	I.
Rubber Bandage	134	IV.
Maryngotome	44	II.
Mason's Catheter Staff	44	III.
Minor Operating Case	59	I.
Pocket Case	55	I.
Maisonneuve's Stone Crusher	39	III.
Masticator	101	II.
Mastin's Stricture Cutter	26	III.
Maisonneuve Urethrotome	25	III.
Mastoid Process Instruments	50	II.
Process Knife	44	II.
Mathew's Obstetrical Forceps	108	III.
Mathieu's Prolapsus Ani Supporter,	134	IV.
Throat Forceps	83	II.
Tonsilotome	65	II.
Writer's Cramp Apparatus	132	IV.
Maury's Fumigation Apparatus	48	III.
Maxillary, Lower, Fracture	75	IV.
Saw	18	I.
Maw's Enema Pump	84, 120	III.

	Page	Part
May's Lithotomy Case	16	III.
Tourniquet	38	I.
Mayor's Clavicle Apparatus	92	IV.
McClintock's Polypus Forceps	99	III.
McFarlan's Lachrymal Syringe	6	II.
McFerran's Obstetrical Forceps	109	III.
McIntire's Splint	66	IV.
McIntosh Waterproof Cloth	122	I.
McIlroy's Operating Table	123	I.
Speculum Chair	124	I.
McIntyre's Fracture Apparatus	66	IV.
McLean's Obstetrical Forceps	106	III.
Meadow's Speculum Vaginæ	52	III.
Meatus, Auditorius	34	II.
Urethral	2, 11	III.
Meatoscope	2, 11	III.
Meatotome	11	III.
Medicine Cases	126	I.
Chests	128	I.
Saddle Bags	129	I.
Meig's Craniotomy Forceps	113	III.
Membrana Tympanii	37	II.
Mercier's Sonde Coudée	9, 18	III.
Sonde Bicoudée	9, 18	III.
Mercurial Fumigation Apparatus	48	III.
Metacarpal Saws	4, 12, 14	I.
Metric Scale, for Urethral Instruments	6	III.
System		S.
Metrotomes	80	III.
Metrorganon	74	III.
Microscope	90	I.
Dissecting Case	96	I.
Forceps	92	I.
Instruments	90	I.
Needles	92	I.
Scalpels	92	I.
Section Knives	92	I.
Syringe	93	I.
Midwifery Forceps	103	III.
Instruments	103	III.
Miller's Obstetrical Forceps	103	III.
Uterine Dilator	79	III.
Miliano's Suspensory	19	IV.
Miliken's Ear Speculum	35	II.
Milium Needle	11	V.
Milne's Artery Compression Forceps	30	I.
Urethrotome	2	S.
Minim Measure	126	I.
Pipette	126	I.
Minor Operating Cases	33, 35 39, 51, 55, 59	I.
Operating Instruments	6, 44	I.
Minor's Pocket Case	51	I.
Stricture Dilators	23	III.

	Page	Part
Minor's Trachea Retractors	14	V.
Mincing Machine	101	II.
Mirrors, Ear	34	II.
Laryngeal	68	II.
Mitchel's Adhesive Plaster	61	IV.
Mohr's Burette	79	I.
Beaker	79	I.
Stand	79	I.
Molar Forceps, Dental	2, 3, 4	V.
Mop, for Canulas	95	II.
Morbus Coxarius Splints ... 41, 43, 44, 47, 73, 89,	111	IV.
Morgan's Fracture Bed	97	IV.
Morton's Ether Inhaler	118	I.
Mose's Bullet Extractor	40	I.
Mott's Aneurism Needles	28	I.
General Operating Case	23	I.
Retractors	20	I.
Speculum Oris	61	II.
Tourniquet	32	I.
Mouth Gags	60	II.
Gags	16	S.
Specula	60	II.
Movable Point Scissors	81	II.
Multum in Parvo Pocket Case	43	I.
Munde's Rectal Irrigator	118	III.
Munger's Splint	98	IV.
Munson's Refraction Model	10	S.
Perineal Stay	116	III.
Quill Suture	116	III.
Murray's Electrolysis Needle	110	I.
Mussey's Mouth Gag	60	II.
Musseux's Vulsellum	63	II.
Nachet's Trial Set	23	II.
Nævus Needle	10	V.
Naegeli's Obstetrical Forceps	106	III.
Perforator	111	III.
Nail Cleaner and File	12	V.
Extracting Forceps	12	V.
File	12	V.
Instruments	12	V.
Nippers	12	V.
Spring	12	V.
Nasal Clamp	37	II.
Douche	57, 58	II.
Douche	4	S.
Electrode	108	I.
Instruments	55	II.
Polypus Canula	57	II.
Polypus Forceps	57	II.
Specula	55, 56, 57	II.
Nebulizer, Atomizer	87, 88, 89	II.
Necrosis Forceps	10, 12	I.
Osteotomy	8	I.
Needle, Agnew's, Perineal	115	III.
Aneurism	6, 28, 61	I.
Ashton's, Perineal	115	III.
Buck's	61	I.
Bowman's, Stop	33	II.
Bozeman's	72	III.
Canulated	28	I.
Cleborne's	14	S.
Crampton's, Artery	26	I.
Dowell's, Hernia	126	III.
Electrolysis	110	I.
Eye	27	II.
Forceps, Cleborne's	26	S.
Forceps, Dudley's	16	S.
Forceps, Emmett's	13	V.
Forceps, Prout's	10	II.
Forceps, Russian	5	S.
Forceps, Sands'	10	II.
Forceps, Sims'	72, 123	III.
Forceps, Stimson's	63	I.
Forceps, Stimson's	14	V.
Hayes' Knife	32	II.
Helical	115	III.
Hernia	126	III.
Holder, Bozeman's	72	III.
Holder, Microscopic	92	I.
Holder, Nott's	73	III.
Holder, Roux's	73	III.
Hypodermic Syringe	72	I.
Irido Platinum	11	V.
Microscopic	92	I.
Milium	11	V.
Mott's, Artery	28	I.
Nævus	10	V.
Open-eyed	63	I.
Paracentesis Corneæ	29	II.
Parker's, Perineal	116	III.
Peaslee's, Perineal	116	III.
Perineal	116	III.
Post's	61	I.
Skene's, Perineal	115	III.
Staphylorrhaphy	66	II.
Staphylorrhaphy	10	V.
Staphylorrhaphy	10	S.
Student's, Aneurism	28	I.
Suture	63	I.
Suture	123	III.
Tattooing	33	II.
Walton's, Cataract	33	II.
Wire Suture	63	I.
Whitehead's	66	II.
Wilde's, Canulated	32	II.
Nelaton's Bullet Probe	40	I.
Catheter	18	III.
Evacuating Apparatus	44	III.

	Page	Part
Nelaton's Pedicle Forceps	97	III.
Tumor Forceps	97	III.
Nelson's Speculum Vaginæ	53	III.
Newman's Atomizer	91	II.
Metrorganan	74	III.
Obstetrical Forceps	109	III.
Obstetrical Forceps	1	S.
Noeggerath's Supporter	17	IV.
Clamp	94	III.
Exploring Trocar	91	I.
Pessary	88	III.
Uterine Elevator	75	III.
Nose, Artificial	136	IV.
Clamp	37	II.
Nott's Applicators	73, 83	III.
Artery Clamp Forceps	30	I.
Case of Uterine Instruments	61	III.
Depressor	68	III.
Double Current Catheter	45, 82	III.
Intra-Uterine Scarifyer	73	III.
Lead Sound	73	III.
Needle Forceps	68	III.
Rectilinear Ecraseur	94	III.
Roux Needle Holder	73	III.
Speculum Vaginæ	56	III.
Sponge Holder	73	III.
Sponge Tent Expeller	73	III.
Tenaculum	98	III.
Twisting Forceps	68	III.
Uterine Dilator	79	III.
Uterine Instruments	73	III.
Uterine Syringe	83	III.
Neugebauer's Speculum	66	III.
Noyes' Brush Holder	85	II.
Canalicula Knives	8	II.
Case of Eye Instruments	11	II.
Conjunctiva Forceps	7	II.
Ear Forceps	46	II.
Eye Specula	4	II.
Fixation Forceps	25	II.
Iris Scissors	32	II.
Lachrymal Gouge	7	II.
Ophthalmostate	25	II.
Stilling's Knife	10	II.
Obstetrical Forceps	103	III.
Cases	69, 71	III.
O'Biern's Constipation Tube	100	II.
Œdema Glottis Instrument	80	II.
Œsophageal	82	II.
Stricture Dilators	84	II.
Ointment Bougie	21, 82	III.
Syringe	82	III.
O'Leary's Pessary	91	III.

	Page	Part
Olecranon Fracture Apparatus	94	IV.
Olivary Catheter	13	III.
Operating Cases, General	5	I.
Cases, Minor	33	I.
Furniture	123	I.
Scalpel	6	I.
Ophthalmophantome	23	II.
Ophthalmoscopes	13, 14, 22, 23	II.
Use of	15	II.
Ophthalmostates	25	II.
Optometer	23	II.
Oral Instruments	60	II.
Saw	67	II.
Screw	60	II.
Specula	60	II.
Ormiston's Urine Test Case	80	I.
Orthopædic Apparatus		IV.
Osborne's Obstetrical Forceps	107	III.
Osteotomy Instruments	8	I.
Osteological Material	130	I.
Osteotrite, Marshall's	22	I.
Osteophor	12	I.
Otis' U. S. A. Compact Field Case	57	I.
Bulbous Urethrotome	28	III.
Bougie à Boule	11	III.
Dilating Catheter Syringe	22	III.
Dilating Urethrotomes	25, 27	III.
Endoscopic Tube	2	III.
Exploring Sound	31	III.
Meatus Dilator	2	III.
Metric Scale	6	III.
Prostatic Guide	18	III.
Prostatic Guide	9	S.
Syringe Nozzle	22	III.
Urethrameter	27	III.
Urethrotomes	25	III.
Otoscopes	34, 35, 36	II.
Ovarian Tumors	92	III.
Ovariotomy Instruments	92	III.
Paine's Nasal Feeding Tube	101	II.
Palatorrhaphy Instruments	66	II.
Palmer's Uterine Dilator	79	III.
Pamard's Pique	25	II.
Paquelin's Thermo-Cautery	134	I.
Paracentesis, Abdominis	101	III.
Çorneæ	29	II.
Thoracis	131	I.
Parallel Harelip Forceps	60	II.
Paralysis Apparatus	33	IV.
Hand	23	IV.
Hemiplegia	34	IV.
Paraplegia	33, 34	IV.
Parker's Amputating Knife	4	I.
Artery Needles		

	Page	Part
Parker's Catheter Syringe	22, 83	III.
Compact Operating Case	31	I.
Compound Catheter	52	I.
Compound Catheter	20	III.
Fistula Lachrymalis Knife	8	II.
General Operating Case	15	I.
Perineum Needles	116	III.
Pocket Cases	43	I.
Retractors	20	I.
Saw	2	I.
Parmley's Tooth Forceps	6	V.
Patella, Fracture Apparatus	68, 69, 70, 71, 72	IV.
Cap, Tiemann's	72	IV.
Support, Bacon's	135	IV.
Peaslee's Perineum Needles	116	III.
Stem-Pessary	91	III.
Uterine Case	63	III.
Uterine Dilators	77	III.
Uterotome	81	III.
Pelvimeter, King's	14	V.
Pencil Case Thermometer	76	I.
Penis, P. P. Syringe	22	III.
Percussors	82	I.
Perineal Lithotrity	43	III.
Tourniquet, Otis'	18	S.
Perineum Case, Agnew's	116	III.
Laceration, Instruments for	115	III.
Needles	115, 116, 123, 124	III.
Suture Stays	116	III.
Periosteotomes	6, 8	I.
Periosteotomes	66, 67	II.
Periosteum Levators	20	I.
Perforators, Obstetrical	111	III.
Perry's Pessary	89	III.
Pes Equinus	27	IV.
Equino-Varus	29	IV.
Pessary, Babcock's	86	III.
Ball's Stem	89	III.
Bozeman's Support	18	S.
Braun's	14	V.
Braun's Colpeurynter	90	III.
Buttle's	88	III.
Carroll's	19	S.
Chamberlain's	87	III.
Coleman's	21	S.
Conant's Intra-Uterine	90	III.
Cutter's	86	III.
Cutter's Ring	91	III.
Coxeter's Stem	90	III.
Davie's	86	III.
Edward's	90	III.
Emmett's Ring	88	III.
Fowler's	91	III.
Fowler's Bow	23	S.
Pessary, Frazer's	88	III.
Globe	88	III.
Graily Hewitt's	88, 91	III.
Hank's Galvanic	88	III.
Hewitt's	89	III.
Hitchcock's Anteversion	89	III.
Hodge's	89	III.
Hoffman's	88	III.
Hornby's	86	III.
Hurd's	90	III.
Introducer	91	III.
Kinloch's Anteversion	89	III.
Kinloch's Retroflexion	89	III.
Kinloch's Prolapsus	89	III.
Noeggerath's	88	III.
O'Leary's	91	III.
Peaslee's Stem	91	III.
Perry's Flexion	89	III.
Rozer's	86	III.
Skene's Cystocele	18	S.
Skene's Urinal Cup	91	III.
Sleigh	88	III.
Smith's	87	III.
Stem	90, 91	III.
Thomas' Anteflexion	89	III.
Thomas' Anteversion	87	III.
Thomas' Cutter's	87	III.
Thomas' Galvanic Stem	90	III.
Thomas' Intra-Uterine	89	III.
Thomas' Retroflexion	89	III.
Thomas' Retroversion	87	III.
Tiemann & Co.'s	86	III.
Trask's	90	III.
Weber's	91	III.
Woodward's	5	S.
Zwank's	88	III.
Pessary Catheter, Harrison's	20	III.
Introducer, Sims'	91	III.
Peter's Hernia Director	48	I.
Urethrotome	25	III.
Petit's Fistula Lachrymalis Knife	10	II.
Spiral Tourniquet	32	I.
Phalanges, Dislocation Apparatus	82	IV.
Phelp's Abdominal Supporter	18	IV.
Artery Torsion Forceps	30	I.
Phlebotomy Instruments	66	I.
Phymosis	1	III.
Forceps	1	III.
Scissors	1	III.
Physiological Experiments	97	I.
Physicians' Vial Cases	126	I.
Physick's Gorget	41	III.
Piesmeter, Beard's	88	I.
Piffard's Comedone Extractor	11	V.
Cutisector	92	I.

	Page	Part
Piffard's Cutisector	11	V.
Electrodes	105	I.
Epilating Forceps	11	V.
Grappling Forceps	11	V.
Irido Platinum Needle	11	V.
Milium Needle	11	V.
Pipette	79	I.
Scarifying Spud	11	V.
Sharp Spoon	11	V.
Urine Test Apparatus	79	I.
Water-Oven	79	I.
Pilcher's Trachea Retractor	94	II.
Pile Bougies	124, 125	III.
Clamp (Forceps)	119	III.
Needles	123	III.
Supporters	124	III.
Supporters	19, 134	IV.
Syringe	125	III.
Pin, Harelip	59, 60	II.
Hæmorrhoidal	122	III.
Plastic	50	II.
Pinkham's Graduated Measure	74	I.
Pitha's Tracheotome	93	II.
Placenta Instruments	110	III.
Plaster, Adhesive	78	IV.
Paris Dressing	101	IV.
Paris Machine, Spreading	13	S.
Paris Shears	103, 124, 133	IV.
Platinum Cup, Lente's	76	III.
Plastic Pin	59	II.
Pin	122	III.
Pleximeters	82	I.
Hess', for Skin	11	V.
Pneumatic Aspirator	131	I.
Apparatus	97	II.
Pneumatometer	98	II.
Pocket Cases	41	I.
Instruments	54	I.
Instrument, 4 blades	60	I.
Illuminator	79	II.
Gouge and Spatula	27	II.
Gum Lancet	58, 61	I.
Scalpel	58	I.
Spud and Needle	27	II.
Tenaculum	58, 60, 61	I.
Tenotome	58	I.
Tongue Depressor	61	II.
Politzer's Acoumeter	27	S.
Air Bag	39	II.
Ear Spoon	45	II.
Ear Cases	36, 38	II.
Eyelets	37	II.
Eyelet Forceps	37	II.
Manometer	43	II.
Meatus Knife	37	II.
Politzer's Polypus Forceps	45	II.
Tympanum Perforator	37	II.
Polypus, Aural	45, 46, 47	II.
Canula	57	II.
Dressing Forceps	50	I.
Nasal	57	II.
Uterine	92 to 99	III.
Pomeroy's Catheter Holder	37	II.
Ear Forceps	47	II.
Pond's Sphygmograph	87	I.
Pope's Antrum Drill	12	I.
Port Acid Glass	44	II.
Caustiques	50, 52	I.
Caustiques	45, 85	II.
Caustiques	20, 21, 74, 76, 82, 83, 120	III.
Mèche	61	I.
Mèche	123	III.
Portal Vein Ligator	98	I.
Post's Chain-Saw Carrier	28	I.
General Operating Case	11	I.
Ligature Carrier	28	I.
Needle	61	I.
Pin Conductor	60	II.
Rongeur	50	II.
Post Mortem Cases	96	I.
Mortem Hammer	97	I.
Mortem Instruments	93	I.
Mortem Saw and Knife	95	I.
Posterior Nares Syringes	56	II.
Pott's Disease, Spine Apparatus	2, 135	IV.
Splint, Raphael's	74	IV.
P. P. Syringes	22	III.
Powder Blower, Aural	49	II.
Blower, Laryngeal	85, 86	II.
Blower, Nasal	87	II.
Blower, Uterine	84	III.
Blower, Urethral	9	III.
Prepuce Instruments	1	III.
Prince's Hand	21	IV.
Bone Staff	16	I.
Harelip Clamp	59	II.
Retractor	16	I.
Staff, Bone	16	I.
Staphylorrhaphy Instrument	10	S.
Tenaculum Forceps	26	I.
Pritchart's Anklets, Lithotomy	38	III.
Wristlets, Lithotomy	38	III.
Pritchett's Rotating Urethrotome	21	S.
Probangs	83, 84	II.
Probangs	74	III.
Probangs	5	S.
Probe Director	50	I.
Probes	50, 61	I.
Bullet	42	I.

Page Part

- Probes, Ear 43, 44 II.
  - Eye 6 II.
  - Nasal Duct 16 S.
  - Uterine 73 III.
  - Rectal 120, 121 III.
- Probe-pointed Bistoury 6, 46, 48, 56, 60, 61 I.
- Prolapsus Ani Supporter 124 III.
  - Ani Supporter 19, 134 IV.
  - Uteri Supporter 17 IV.
- Prostatic Catheters 13 III.
  - Guide, Otis' 9 S.
  - Guide, Keye's 18 III.
- Prout's Entropium Forceps 2 II.
  - Needle Forceps 10 II.
- Prussian Field Tourniquet 32 I.
- Psychrophor 12, 17 S.
- Pterygium Scissors 29 II.
- Pus Basins 49 II.
- Pulleys, Dislocation 81 IV.
- Pulling's Funis Clamp 110 III.
- Pump, Aspirator 131 I.
  - Air 89 II.
  - Cupping 64 I.
  - **Stomach** 99 II.
- Pupillometer 23 II.

- Quadrivalve Speculum Vaginæ 52, 58 III.
- Quain's Stethometer 86 I.
  - Stethoscope 81 I.
- Quill Suture Stay 116 III.

- Rachitome, Chisel 95 I.
  - Saw 97 I.
- Radius and Ulna, Dislocated 93 IV.
- Ramage's Inhaler 90 II.
- Raphael's Pott's Splint 74 IV.
- Rapid Filtration Apparatus 79 I.
  - Uterine Dilators 21 S.
- Raspatory 4 I.
  - U. S. A. 10 I.
- Ratchet Truss 11 IV.
- Rattis' Trichiasis Forceps 2 II.
- Reagents, Urine Test 77 I.
- Reamer, Post Mortem 94 I.
- Recipro-Laryngoscope 78 II.
- Rectal 117 III.
  - Bougie 117 III.
  - Curette 120 III.
  - Dilator 118 III.
  - Dilator 8 S.
  - Dressing Forceps 119 III.
  - Electrode 106 I.
  - Feeding Tube 101 II.
  - Insufflator 110 III.

Page Part

- Rectal Irrigators 118 III.
  - Puncture of Bladder 30 III.
  - Port Caustique 120 III.
  - Probe 120 III.
  - Sponge Mop Holder 119 III.
  - Trocar 30 III.
- Rectangular Staff 40 III.
- Rectilinear Ecraseur 94 III.
- Recto-Colonic Endoscope 117 III.
  - Colonic Enema Apparatus 120 III.
- Redressors, Uterine 75, 76 III.
- Redfern Davis' Hernia Instrument 126 III.
- Reed's Pile Bougie 125 III.
  - **Pocket Case** 45 I.
- Reese's Uterine Leech 2 S.
- Reflux Catheter 82 III.
  - Catheter 18 S.
- Refraction, Munson's Model 10 S.
- **Regimental Surgeon's Pocket Case** 47 I.
- Reginald Harrison's Pessary Catheter 20 III.
- Reliquet's Double Current Catheter, 82 III.
  - Lithotrite, large 34 III.
  - Lithotrite, small 45 III.
- Repositor, Uterine 85 III.
- Resection, Osteotomy 8 I.
- Resonator, Holden's 9 S.
- Respirators 91 II.
- Respirometer, Marsh's 27 S.
- Retention Catheters 13 III.
- Retractors, Blackman's 20 I.
  - Cheek 66 II.
  - Desmarre's 4 II.
  - Luer's 66 II.
  - Minor's 14 V.
  - Mott's 20 I.
  - Pilcher's 94 II.
  - Parker's 20 I.
  - Prince's 16 I.
  - Rose's 93 II.
  - Well's 93 II.
- Retort Stand 79 I.
- Retroflexion Pessary, Carroll's 19 S.
- Retroversion Pessaries 86 III.
- Revulsor, Hamilton's 117 IV.
- Rhinoplastos 3 S.
- Rhinoscopes 58 II.
- Rhinoscopic Mirror 58 II.
- Rhode's Double Inclined Plane 104 IV.
  - Fracture Bed 104 IV.
- Rib Shears 18 I.
- Richardson's Atomizer 119 I.
  - Atomizer 27, 89 II.
  - Clavicle Splint 76 IV.

	Page	Part
Richardson's Respiration Instrument	97	II.
Spray Producer	119	I.
Spray Producer	89	II.
Riding Belt	18	IV.
Ring, to remove from swollen finger,	106	IV.
Pessary	88	III.
Robert's Urine Test Apparatus	80	I.
Robertson's Obstetrical Forceps	105	III.
Robert & Collin's Nasal Speculum	55	II.
Robinson's Insufflators, Asphyxia	109	III.
Obstetrical Forceps	107	III.
Powder Blower	90	II.
Rockwell's Ball Electrode	108	I.
Electrolysis Needle	110	I.
Needle Holder	111	I.
Obstetrical Forceps	108	III.
Roe's Inhaler	91	II.
Tobold's Laryngoscope	68	II.
Uvula Hook	84	II.
Roger's Phymosis Forceps	1	III.
Rehland's Styptic Cotton	54	IV.
Roller Bandage	75	IV.
Roller's Obstetrical Forceps	106	III.
Roosa's Ear Case	42	II.
Politzer Bag	39	II.
Root Extractors, Dental	9	V.
Forceps, Dental	4, 5, 6	V.
Rose's Trachea Retractor	93	II.
Rongeur, Gouging Forceps	24	I.
Post's, Mastoid Process	50	II.
Roux's Needle Holder	73	III.
Rozer's Pessary	86	III.
Rubber Bandage	134	IV.
Catheters, soft	15, 16, 18	III.
Ruptured Perineum Needles	115	III.
Ruppaner's Brush Holder	85	II.
Russian Needle Holder	5	S.
Ryerson's Vectis	109	III.
Saddle Bags, Medical	129	I.
Safety Spray-Tube Cleaner	122	I.
Salt's Cradle	96	IV.
Sand Bath		
Sands' Needle Forceps	10	II.
Pereosteotome	8	I.
Sass' Receiver and Pump	89	II.
Spray Producers	89	II.
Tongue Depressor	62	II.
Satin Suture Silk	16	I.
Satterlee's Amputating Saw	2	I.
Bone Forceps	6	I.
Sawyer's Obstetrical Forceps	109	III.
Obstetrical Forceps	1	S.
Saws, Adam's Subcutaneous	3	S.
Amputating	2	I.

	Page	Part
Saw's, Bow	2	I.
Butcher's	6	I.
Capital	2	I.
Chain	14	I.
Circular	14, 18	I.
Detmold's Metacarpal	12	I.
Exsecting	2, 14	I.
Folding	12	I.
Heine's	22	I.
Hey's	12	I.
Lente's Interosseous	14	I.
Lewis' Folding	12	I.
Lifting-Back	14, 99	I.
Maxillæ	18	I.
Metacarpal	4, 12, 14	I.
Post Mortem	95, 97	I.
Rachitome	97	I.
Satterlee's Capital	2	I.
Shrady's Subcutaneous	26	S.
Stohlmann's Bead	7	S.
Stohlmann's Rotating	2	I.
Szymanowsky's	14	I.
Parker's Capital	2	I.
Tiemann's Bow	2	I.
Tiemann's Capital	2	I.
Sayre's Ankle-Joint Splint	52	IV.
Bullet Probe	40	I.
Clubfoot Shoe	80	IV.
Clavicle Dressing	77	IV.
Compressor, Knee and Ankle,	130	IV.
Jury Mast	129	IV.
Hip Splint, short	42	IV.
Hip Splint, long	111	IV.
Knee-Joint Splint	51	IV.
Pereosteotome	8	I.
Pereosteotome	66	II.
Pocket Case	51	I.
Shears, Plaster Paris	124	IV.
Suspension Apparatus	128	IV.
Tenotomes	6	I.
Scales, Catheter Guage	3	III.
Scalpels	6, 46, 48, 58, 61, 92, 95	I.
Scalpels	10, 59, 93	II.
Scalpels	40	III.
Scarificators	64	I.
Scarifyer, Eye	8	II.
Rectal	121	III.
Uterine	74, 80	III.
Scarifying Spud, Piffard's	11	V.
Scissors, Allingham's	121	III.
Althoff's	30	II.
Amputating Cervix	81	III.
Angular, Bozeman's	70	III.
Angular Operating	50	[illegible]
Angular Strabismus	12	I[illegible]

	Page	Part
Scissors, Artery	48	I.
Bozeman's	70, 71	III.
Bush's Pile	124	III.
Canulated	32	II.
Chadwick's Pterygium	29	II.
Clark's Tooth-edged	81	III.
Conjunctiva	29	II.
Curved, flatwise	50	I.
Dissecting	50	I.
Dressing	52	I.
Ear	37, 44	II.
Enterotome	95	I.
Emmett's	70	III.
Gay's Open Ring	60	I.
Gruber's Ear	44	II.
Hall's Iris	33	II.
Hæmorrhoidal	124	III.
Harelip	59	II.
Heywood Smith's	70	III.
Hysterotome	80	III.
Iridectomy	30, 31	II.
Iris	30, 31, 33	II.
Kuechenmeister's	81	III.
Maunoir's	8	II.
Movable Points	81	II.
Perforating	111	III.
Pile	124	III.
Phymosis	1	III.
Plaster Paris	66, 103, 124, 133	IV.
Probe-pointed	99	I.
Sims'	70	III.
Simrock's Ear	37	II.
Staphylorrhaphy	66	II.
Strabismus	12	II.
Smith's Movable	80	II.
Tardieu's	94	II.
Taylor's	1	III.
Tiemann's Movable	81	II.
Tonsil	65	II.
Tooth-edged	81	III.
Trachea	94	II.
Uterine	80, 81	III.
Uvula	64	II.
Wilde's Canulated	32	II.
Wire Cutting	72	III.
Schaffer's Scoop	83	II.
Schlotterbeck's Speculum	66	III.
Schofield's Inhaler	91	II.
Scholler's Cord Carrier	105	III.
Schroetter's Laryngeal Cautery Electrodes	113	I.
Laryngoscope	77	II.
Laryngeal Lancet	81	II.
Laryngeal Forceps	81	II.
Schuppert's Galvanic Truss	15	IV.
Schuyler's Speculum Vaginæ	4	S.
Schweig's Urethral Stricture Dilator	31	S.
Scoliosis, Brace	3, 135	IV.
Scoop, Bone	22	I.
Laryngeal	83	II.
Lithotomy	39, 40	III.
Rectal	120	III.
Sessile Tumor	9	S.
Siemon's	74	III.
Urethral	45	III.
Uterine	74 III. 9	S.
Screw Elevator, Dental	9	V.
Oral	60	II.
Scrotal Instruments	46	III.
Sea-tangle Tents	77, 90	III.
Searchers, for Stone in the Bladder	31	III.
Section-Cutter, Microscopic	91	I.
Knives, Microscopic	91	I.
Enlarging Knives, Eye	31	II.
Razor Microscopic	92	I.
Segala's Speculum Vaginæ	54	III.
Seeger's Brush Holder	85	II.
Tobold's Laryngoscope	76	II.
Steam Nebulizer	88	II.
Seguin's Thermometers	76	I.
Seizing Forceps	63, 67	II.
Forceps	68	III.
Self-Adjusting Truss	13	IV.
Retaining Catheter	15, 18	III.
Retaining Catheter	18	S.
Semeleder's Laryngoscope	78	II.
Seminal Cord Compress	134	IV.
Sequestrum Forceps	10, 24	I.
Forceps	12	V.
Serres-fins	30	I.
Sessile Tumor Scoop	9	S.
Seton Needle	54	I.
Sexton's Ear Douche	50	II.
Nozzle, Politzer	39	II.
Insufflator	6	S.
Seymour's General Operating Case	25	I.
Shaffer's Knee Splint	90	IV.
Lateral Screw	88	IV.
Ankle Supports	24	S.
Ball and Socket Pivot	24	S.
Clubfoot Shoe	23	S.
Plaster Zone, Spinal	25	S.
Sharp-pointed Bistoury	6, 46, 48, 54, 56, 60, 61, 62	I.
Lithotomy Scalpels	40	III.
Shears, Plaster Paris	133	IV.
Brun's	133	IV.
Esmarch's	133	IV.
Henry's	66	IV.

Page Part

- Shears, Sayre's .... 124 IV.
  - Szymanowsky's .... 133 IV.
  - Wackerhagen's .... 103 IV.
- Short-Leg Extension Apparatus .... 25 IV.
- Shot Compressor .... 115 III.
- Shoulder Braces .... 1 IV.
  - Dislocation Brace .... 24 IV.
- Shrady's Colle's Fracture Apparatus 79 IV.
  - Subcutaneous Saw .... 26 S.
- Shrimpton's Smith Splint .... 94 IV.
  - Forceps .... 96 IV.
- Sickle-shaped Iris Knife .... 32 II.
- Siemon's Curette .... 74 III.
- Sieveking's Æsthesiometer .... 85 I.
- Siegle's Aural Speculum .... 43 II.
- Sigismund's P. P. Syringe .... 22 III.
- Sigmoid Catheter .... 68 III.
- Silk, Ligature and Suture .... 16 I.
- Silver Suture Wire .... 63 I.
- Sims' Anal Dilator .... 125 III.
  - Adjuster, Suture .... 66 II.
  - Adjuster, Suture .... 67 III.
  - Bivalve Speculum .... 64 III.
  - Blunt Hook .... 67 III.
  - **Cases of Instruments** .... 59, 65, 67 III.
  - Caustic Forceps .... 74 III.
  - Curette .... 74 III.
  - Depressor .... 68 III.
  - Ecraseur, Port Chain .... 99 III.
  - Elevator .... 75 III.
  - Enucleator .... 99 III.
  - Knives and Holder .... 81 III.
  - Needle Forceps .... 72, 123 III.
  - Pessary Introducer .... 91 III.
  - Port Chain Ecraseur .... 99 III.
  - Pulley, or Fork .... 67 III.
  - Redressor, Uterine .... 76 III.
  - Rotating Knife .... 80 III.
  - Scalpel .... 68 III.
  - Scissors .... 70 III.
  - Seizing Forceps .... 68 III.
  - Sigmoid Catheter .... 68 III.
  - Speculum, Duck-Bill .... 64, 67 III.
  - Speculum, Modified .... 12 S.
  - Tampon Screw .... 99 III.
  - Tenaculum .... 68 III.
  - Twisting Forceps .... 66 II.
  - **Uterine Case** .... 59 III.
  - Uterine Dilator .... 77 III.
  - Uterine Elevator .... 75 III.
  - **Vesico-Vaginal Fistula Cases** .... 65, 67 III.
  - Vaginal Dilator .... 66 III.
  - Vulsellum Hook .... 99 III.

Page Part

- Simpson's Cephalotrite .... 114 III.
  - Cranioclast .... 113 III.
  - Hysterotome .... 80 III.
  - Obstetrical Forceps .... 104 III.
  - Perforator .... 111 III.
  - Sound, Uterine .... 75 III.
  - Uterine Dilators .... 77 III.
- Simrock's Ear Scissors .... 37 II.
  - Laryngeal Forceps .... 82 II.
  - Nasal Speculum .... 57 II.
  - Otoscope .... 35 II.
  - Polypus Forceps .... 57 II.
  - Rhinoscope .... 58 II.
- Skeleton, Human .... 130 I.
- Skene's Cystocele Pessary .... 18 S.
  - Double Perforated Catheter . 18 S.
  - Endoscope .... 17 S.
  - Fissure Knife .... 67 III.
  - Fissure Probe .... 67 III.
  - Instillation Tube .... 65 III.
  - Perineum Needle .... 115, 123 III.
  - Reflux Catheter .... 59 III.
  - Reflux Catheter .... 18 S.
  - Self-Retaining Catheter .... 18 S.
  - Sound and Scarifyer .... 80 III.
  - **Uterine Case** .... 59 III.
  - Uterine Sound .... 75 III.
  - Uterine Sector .... 32 S.
  - **Uro-Cystic and Urethral Case** .... 17 III.
  - Urethral Speculum .... 2 III.
  - Urinal Cup Pessary .... 91 III.
- Skey's Arterial Compressor .... 34 I.
- Skinner's Fracture Bed .... 57 IV.
- Skin-Grafting Scissors .... 90 I.
  - Scissors .... 11 V.
- Skulls .... 130 I.
- Sleigh Pessary .... 88 III.
- Slide-catch Artery Forceps .... 44 I.
  - Artery Forceps .... 119 III.
- Sliding Uterine Sound .... 76 III.
- Smellie's Perforator .... 111 III.
- Smith's Anterior Splint .... 54, 74, 94 IV.
  - Artificial Femur .... 107 IV.
  - Artificial Forearm .... 109 IV.
  - Artificial Humerus .... 109 IV.
  - Artificial Tibia .... 108 IV.
  - Hæmorrhoidal Clamp .... 119 III.
  - Harelip Forceps .... 60 II.
  - Lithotome .... 40 III.
  - Pessary .... 87 III.
  - Pile Clamp .... 119 III.
  - Ununited Fracture Apparatus . 106 IV.
  - (Geo. K.) Urethrotome .... 27 III.
  - Wire Ecraseur .... 92, 93 III.

	Page	Part
Stoehrer's Galvanic Battery	100	I.
Stokes' Stethoscope	81	I.
Eye Lid Compressor	2	II.
Stomach Pump	99, 100	II.
Tubes	101	II.
Stone, in Bladder, Instrument for	31	III.
Cases of Instruments	14, 16, 17	III.
Stoerk's Drop Tube	86	II.
Storer's Clamp Shield	96	III.
Speculum Vaginæ	58	III.
Uterine Scarificator	80	III.
Stowe's Retroversion Elevator	75	III.
Strabismus Case	5	II.
Instruments	12	II.
Strabometer	12	II.
Straight Jacket	113	IV.
Strawbridge's Keratome Scissors	31	II.
Cataract Scissors	31	II.
Stricture Cases of Instruments.	10, 12, 14	III.
Cutters	25, 26, 27, 28	III.
Dilators	23	III.
Dilator	31	S.
Divulsors	23	III.
Explorers	9	III.
Œsophageal	84	II.
Rectal	117, 118, 119	III.
Urethral	9	III.
Students' Aneurism Needle	28	I.
Lamp	76	II.
Stump Forceps, Dental	2	V.
Styptic Cotton	54	IV.
Styles, Eye	10	II.
Subcutaneous (Hypodermic) Syringes	70	I.
Section Knife	3	S.
Saws	3, 26	S.
Substitute for the Hand	21	IV.
Supporters	9	IV.
Uterine	86	III.
Suppository Tube	118	III.
Supra-Pubic Puncture, Bladder	30	III.
Lithotomy	42	III.
Suspensory Bandages	19, 20	IV.
Suspension Apparatus	74, 80, 96, 110, 128	IV.
Sussdorff's Tupelo Dilators	11	S.
Suture, Automatic	5	S.
Suture Needles	63	I.
Silk	16	I.
Wire	63	I.
Syme's Abscess Knife	58	I.
Staff	29	III.
Syringe, Anatomical	94	I.
Caustic	21	III.

	Page	Part
Syringe, Davidson's	82	III.
Dick's Caustic	21	III.
Ear	49	II.
Gonorrhœa	22	III.
Hypodermic	70	I.
Lachrymal	6	II.
Maw's	84	III.
Microscopic	93	I.
Nozzle, Otis'	22	III.
Penis	21	III.
Rectal	120	III.
Universal	102	II.
Urethral	21	III.
Vaginal	83, 84	III.
Woodward's	84	III.
Syphon, Nasal	57, 58	II.
Rectal	118	III.
Vaginal	82	III.
Szymanowsky's Gouge	24	I.
Saw	14	I.
Shears, Bandage	133	IV.
Talipes Calcaneus Apparatus	31	IV.
Equinus Apparatus	27, 28	IV.
Valgus Apparatus	31	IV.
Varus Apparatus	29	IV.
Tampon, Epistaxis	56	II.
Tracheal	96	II.
Tape Measure		IV.
Tardieu's Trachea Scissors	94	II.
Tarnier's Obstetrical Forceps	105	III.
Obstetrical Forceps	13	S.
Tarsitani's Obstetrical Forceps	107	III.
Tattoeing Needles	33	II.
Taylor's Blunt Hook	112	III.
Hip Joint Splint	45	IV.
Obstetrical Case	71	III.
Obstetrical Forceps	107	III.
Phymosis Scissors	1	III.
Spine Brace	8	IV.
Urethral Syringe	22	III.
Teevan's Lithotrite	32, 35	III.
Lithotomy Forceps	39	III.
Stricture Cutter	28	III.
Tunnelled Catheter	19	III.
Telescopic Ear Trumpet	54	II.
Speculum	56	III.
Teller's Vaccinator	66	I.
Tenaculum, Amputating	4	I.
Buttle's	74	III.
Double	98	III.
Emmett's	57	III.
Emmett's Double	13	V.
Keith's	42	III.
Little's	48	I.

	Page	Part
Tenaculum, Nott's	98	III.
Operating	6	I.
Pocket Case	58, 60	I.
Staphylorrhaphy	66, 67	II.
Tenaculum Forceps	63	II.
Forceps	98	III.
Forceps	2	S.
Needle, Cleborne's	14	S.
Tendo Achillis Brace	28	IV.
Tenotomes	6, 58, 61	I.
Use	28	IV.
Tents, Sponge	77, 90	III.
Spring	13	V.
Tupelo	11	S.
Test, Drum	7	II.
Tubes	80	I.
Thebeaud's Sphincter Ani Dilator	119	III.
Urethral Stricture Dilator	24	III.
Theobald's Probes	16	S.
Thermo Cautery	134	I.
Thermometers	75	I.
Thermometers	9	S.
Thomas' Antiflexion Pessary	89	III.
Anteversion Pessary	87, 91	III.
Craniotomy Forceps	113	III.
Clamp, Ovarian	94	III.
Clamp, Vaginal Wounds	102	III.
Cusco's Speculum Vaginæ	54	III.
Cutter's Pessary	87	III.
Dilating Forceps	78	III.
Dry Cupper	81	III.
Elastic Probe	73	III.
Galvanic Pessary	90	III.
Hard Rubber Probe	73	III.
Intra-Uterine Pessary	89	III.
Latest Speculum	60	III.
Obstetrical Case	69	III.
Obstetrical Forceps	106	III.
Perforator	112	III.
Punching Forceps	81	III.
Retroflexion Pessary	89	III.
Retroversion Pessary	87	III.
Sac Forceps	96	III.
Scoop, for Sessile Tumors	9	S.
Sim's Speculum	60	III.
Supporter, Abdominal	17	IV.
Telescopic Speculum	56	III.
Tissue Forceps	96	III.
Trocar	102	III.
Tubular Speculum	56	III.
Uterine Case	57	III.
Uterine Dilator	79	III.
Uterine Probes	73	III.
Wound Clamp	102	III.
Thomasin's Bullet Forceps	42	I.

	Page	Part
Thompson's Bougie	11	III.
Catheter, Rubber	18	III.
Catheter, Retention	13	III.
Divulsor	23	III.
Ecraseur	93	III.
Ecraseur	5	S.
Lithotrite	32, 35	III.
Measure, Litho	44	III.
Optometer	23	II.
Prostatic Sound	19	III.
Retention Catheter	13	III.
Searcher, for Stone	31	III.
Urethral Forceps	45	III.
Vulcanite Catheter	18	III.
Three-Fold Pocket Case	41	I.
Throat Forceps	82	II.
Lancet	82	II.
Thudichum's Nasal Douche	57	II.
Nasal Speculum	55	II.
Thumb Lancet	56	I.
Tibia Curvature, Brace	37	IV.
Fracture Apparatus	73	IV.
Ununited Fracture	108	IV.
Tiemann & Co.'s Arm Sling	93	IV.
Artificial Leech	65	I.
Aspirator	133	I.
Atomizer	88	II.
Patent Bent Thermometer	9	S.
Bottle, Hypodermic	15	S.
Bullet Forceps	42	I.
Bullet Screw	40	I.
Bullet Seeker	40	I.
Clubfoot Shoe	29	IV.
Drill Stock	8	I.
Ear Forceps	47	II.
Ecraseur	93	III.
Electrodes	108	I.
Embryotomy Forceps	110	III.
Entropium Forceps	1	II.
Exploring Trocar	90	I.
Finger Pad Truss	14	IV.
Hypodermic Syringe	72	I.
Hypodermic Syringe Bottle	15	S.
Hollow Needle	28	I.
Knee Cap, Patella	72	IV.
Laryngoscope	69	II.
Laryngeal Scoop	83	II.
Leech	65	I.
Long Chain Ecraseur	93	III.
Movable Point Scissors	81	II.
Patent Pocket Case	49, 62	I.
Quatrivalve Speculum	58	III.
Saw, Capital	2	I.
Scarificator	64	I.
Section Knife	91	I.

◆

	Page	Part
Tiemann & Co.'s Spine Braces	2	IV.
Spring Lancet	66	I.
Steam Atomizer	88	II.
Stomach Pump	100	II.
Speculum Vaginæ	58	III.
Supporter	86	III.
Thermometer	76	I.
Tonsilotome	65	II.
Torticollis Brace	7	IV.
Tracheotome	93	II.
Tracheal Aspirator	96	II.
Trachea Forceps	95	II.
Trephine Handle	12	I.
Trivalve Speculum	64	III.
Truss, Finger Pad	14	IV.
Tourniquet	38	I.
Universal Ear Forceps	47	II.
Universal Trachea Forceps	94	II.
Universal Syringe	90	II.
Universal Syringe	84	III.
Uterine Speculum	78	III.
Uterine Supporter	86	III.
Uvulatome	64	II.
Vaccinators	66	I.
Velvet Eye Catheter	11	S.
Tin Splints, Barwell's	38	IV.
Tirefond	16	I.
Tobold's Concealed Lancet	80	II.
Laryngoscope	76	II.
Laryngeal Knives	80	II.
Laryngeal Syringe	86	II.
Pneumatic Apparatus	97	II.
Tonsil Hook	64	II.
Instruments	63, 64, 65	II.
Scissors	65	II.
Tonsilotomes	63, 64, 65	II.
Toes, Luxation of	83	IV.
Overriding, Apparatus	39	IV.
Tongue Depressors	61, 62	II.
Forceps	61, 63	II.
Holders	61	II.
Tie	50, 61	I.
Tooth Elevators	9	V.
Forceps	1	V.
Keys	8	V.
Torsion (Tortion) Forceps	23, 30, 54	I.
Torticollis Braces	6, 7,	IV.
Braces	14	S.
Toswill's Stomach Pump	100	II.
Tourniquets	32	I.
Tourniquet, Esmarch's	119	IV.
Laurence's Eyelid	1	II.
Uterine, Emmett's	14	V.
Toynbee's Diagnostic Tube	43	II.
Ear Case	48	II.
Toynbee's Ear Specula	35	II.
Explorer	43	II.
Tympanum	37	II.
Trachea Canulas	94, 95	II.
Canulas	6	S.
Retractor, Minor's	14	V.
Tampon	96	II.
Tracheal Aspirator	96	II.
Tracheotome, Hauk's	6	S.
Tracheotomy Instruments	93	II.
Tractors	20	I.
Tractors	4, 31	II.
Transfusion Apparatus	67.	I.
Transplantation Scissors	90	I.
Trask's Pessaries	90	III.
Trelat's Urethrotome	26	III.
Trellis' Speculum Ani	117	III.
Trendelenburg's Trachea Tampon	96	II.
Trepan	20	I.
Trepanning Case	49	I.
Elevators	10, 14	I.
Raspatory	10	I.
Scalpel	4	I.
Trephines	12	I.
Trephine Handles	12	I.
Trial Cases, Nachet's	23	II.
Trichiasis Forceps	2	II.
Tripod, Sayre's	129	IV.
Post Mortem	95	I.
Trivalve Speculum Vaginæ	64	III.
Trellis' Speculum	117	III.
Trocars, Abdominal	101, 102	III.
Exploring	90	I.
Hydrocele	46, 47, 48	III.
Rectal	30	III.
Thoracic	101	III.
Trœltsch's Ear Mirror	34	II.
Trousseaux's Pile Supporter	124	III.
Trachea Dilator	94	II.
Trachea Forceps	95	II.
Trueheart's Knock Knee Brace	131	IV.
Obstetrical Forceps	108	III.
Perforator	114	III.
Trumpets, Ear	51	II.
Trusses	9	IV.
Tuning Fork	43	II.
Tunnelled Catheter, Trevan's	19	III.
Sounds	11	III.
Urethrotomes	25, 26	III.
Tumor, Uterine, Ecraseurs	92	III.
Forceps, Uterine	97	III.
Ovarian, Instruments	92, 93, 94, 95, 96, 97, 98, 99	III.
Tupelo Dilators, Sussdorf's	11	S.
Turk's Tongue Depressor	62	II.

	Page	Part
Turnbull's Ear Case	40	II.
Ice Bag	121	IV.
Turn-Keys	8	V.
Turner's Applicator	65	III.
Patella Splint	68	IV.
Twisting Forceps, Emmett's	13	V.
Forceps, Wire	66	II.
Forceps, Fitch's	9	S.
Two-Fold Pocket Case	41	I.
Tympanum, Artificial	37, 51	II.
Perforator	37, 38	II.
Tyrrell's Iris Hooks	30	II.
Ulna and Radius, Dislocated	98	IV.
Umbilical Bandage	9	IV.
and Abdominal Hernia	1[illegible]2	IV.
Truss	9	IV.
Universal Douche	102	II.
Forceps, Tracheal	94	II.
Syringe	90	II.
Syringe	84	III.
Tooth Forceps	4	V.
Ununited Fracture, Apparatus 21, 40, 106, 107, 108,	109	IV.
Unison Resonator	9	S.
Up de Graff's Ear Spout	49	II.
Staphylorrhaphy Case	10	V.
Uraniscoplastic Instruments	66	II.
Urea Tube	78	I.
Urethrameter, Gross'	19	S.
Otis'	27	III.
Weir's	18	S.
Urethral Applicators	21	III.
Catheters	20	III.
Cases of Instruments	4, 8, 10, 12	III.
Diagnosis Instruments	2	III.
Dilators	23	III.
Dilators	12, 20, 31	S.
Divulsors	23	III.
Forceps	45	III.
Sounds	31	III.
Staffs	38	III.
Specula	2, 11	III.
Syringes	21, 22	III.
Urethrometric Sound	28	S.
Urethrotome, Banks'	1	S.
Bates'	18	S.
Bumstead's	27	III.
Bumstead's Maisonneuve	26	III.
Charrière's	26	III.
Civiale's	26	III.
Gouley's Dilating	27	III.
Gouley's Improved	26	III.
Gouley's Tunnelled	25	III.
Urethrotome, Gross'	25	III.
Gross'	20	S.
Hunter's Divulsing	22	S.
Kinloch's Dilating	11	S.
Mastin's	26	III.
Mastin's Maisonneuve	25	III.
Milne's Dilating	2	S.
Otis' Dilating	25, 27	III.
Peters'	25	III.
Pritchet's	21	S.
Smith's, Geo. K.	27	III.
Teevan's	28	III.
Trelat's	26	III.
Voillemier's	26	III.
Westmoreland's	28	III.
Whitehead's	28	III.
Urethrotomy, External	28, 29	III.
Internal	25	III.
Urinals for Incontinence	47	III.
for Incontinence	20	IV.
Urinary Examinations, Apparatus	77	I.
Urinometer	78	I.
U. S. A. Bullet Forceps	40	I.
Capital Operating Case	27	I.
Field Tourniquet	32	I.
Pocket Case	45	I.
Staff Surgeons' Capital Operating Case	29	I.
Staff Surgeons' Minor Operating Case	39	I.
Uro-Cystic and Urethral Case	17	III.
Uterine Applicators	65, 73, 82, 83	III.
Cases of Instruments	53, 55, 57, 59, 61, 63, 65	III.
Dilators	77, 78, 79	III.
Displacement Apparatus	85	III.
Dressing Instruments	74	III.
Dressing Instruments	13	V.
Electrodes	106, 107	I.
Elevators	75	III.
Excision Instruments	81	III.
Forceps	74	III.
Injectors	82, 83, 84	III.
Knives	74	III.
Leeches	2	S.
Probes	71, 73	III.
Repositor	85	III.
Sets of Instruments in Cases	53, 55, 57, 59, 61, 63, 65	III.
Scarifyers	80	III.
Scissors	70, 71, 81	III.
Sector, Skene's	32	S.
Specula	78	III.
Supporters	86	III.
Tenacula	57	III.

	Page	Part
Uterine Tourniquet	14	V.
Tumor Instruments	92	III.
Uterotome, Peaslee's	81	III.
Uvula Hook, Roe's	84	II.
Instruments	63	II.
Scissors	64	II.
Uvulatomes	61	II.
Vaccinators	66	I.
Vaginal	51	III.
Dilators	66	III.
Douches	82	III.
Electrodes	107	I.
Specula	51	III.
Support	18	S.
Syringes	84	III.
Valentine's Section Knives	91	I.
Valgus, Talipes	31	IV.
Van Buren's Cupped Sound	21	III.
Case of Sounds	8	III.
Debris Syringe	44	III.
Double Tube	30	III.
Evacuating Catheter	44	III.
Fumigation Lamp	48	III.
Ligator	92, 122	III.
Pocket Case	45	I.
Sequestrum Forceps	24	I.
Sequestrum Forceps	12	V.
Sounds, Case of	8	III.
Van Buren & Keye's American Scale	5	III.
Case of Urethral Instruments	4	III.
Case of Urethral Instruments	8	III.
Case of Stone Instruments	14	III.
Vance's Æsthesiometer	86	I.
Hypodermic Syringe	71	I.
Urine Test Case	80	I.
Van Huvel's Forceps Saw	113	III.
Vanderveer's Uterine Dilator	79	III.
Varicocele	47	III.
Varicose Veins, Stockings	53	IV.
Vapor Bath	92	II.
Verona's Winch	125	III.
Vectis	105, 109	III.
Vedder's Obstetrical Forceps	108	III.
Velpeau's Writers' Cramp Apparatus	131	IV.
Velvet Eye Catheter	11	S.
Vesical Electrode	107	I.
Vesico-Vaginal Fistula	67	III.
Fistula Cases	63, 65, 67	III.
Vivisection	97	I.
Vial Cases	126	I.
Voltaic Armadillo	104	I.
Voillemier's Stricture Dilators	24	III.

	Page	Part
Voillemier's Urethrotome	26	III.
Von Bruns' Cotton Lint	56	IV.
Wound Dressing	122	I.
Vulsellum Forceps	63, 64	II.
Hook	99	III.
Wackerhagen's Applicator	77	III.
New Fracture Dressing	67	IV.
Plaster Paris, Splint	101	IV.
Pelvis Fixator	103	IV.
Plaster Paris Shears	103	IV.
Speculum Vaginæ	60	III.
Splint	103	IV.
Wagner's Brush Holder	85	II.
Wales' Rectal Bougie	125	III.
Rectal Dilators	8	S.
Waldau's Reflector	78	II.
Waldenburg's Pneumatic Apparatus	97	II.
Pnematometer	97	II.
Walker's Combination Supporter	132	IV.
Walking Cane Ear Trumpet	54	II.
Wallace's Spring Tent	13	V.
Walsh's Stethoscope	81	I.
Walton's Depression Needle	33	II.
Grooved Needle	33	II.
Iris Forceps	32	II.
Warm Water in Surgery	114	IV.
Warner's Catarrhal Douche	90	II.
Washburn's Hip Joint Splint	47	IV.
Spine Brace	5	IV.
Washing, Bladder	37, 49	III.
Water Bath	79	I.
Bath	115	IV.
Oven	79	I.
Weak Ankle Brace	25, 27	IV.
Legs Apparatus	32	IV.
Weber's Canalicula Dilator	6	II.
Canalicula Knives	8	II.
Pessary	91	III.
Speculum Vaginæ	51	III.
Tympanitome	38	II.
Wecker's Iridectomy Scissors	31	II.
Lachrymal Canula	4	II.
Weir's Antiseptic Spray Apparatus	120	I.
Antiseptic Spray Apparatus	15	S.
Mouth Gag	16	S.
Meatoscope	2	III.
Pocket Case	53	I.
Vaccinators	66	I.
Weiss' Speculum	64	III.
Welker's Iridectome	30	II.
Welles' Trachea Retractor	93	II.
Clamp	94	III.
Clamp Forceps	96	III
Pedicle Clamp	95	III.

	Page	Part
Welles' Sac Forceps	97	III.
Torsion Forceps	94	III.
Trachea Retractors	93	II.
Trocar	102	III.
Westmorcland's Speculum Oris	61	II.
Stricture Instrument	28	III.
Whalebone Guides	11	III.
Probang	74	III.
Probe	73	III.
Wheelock's Reverse Flow Syringe	22	III.
White's Hæmarheumoscope	88	I.
Hysterotome	80	III.
Obstetrical Forceps	103	III.
Perforator	114	III.
Uterine Dilator	79	III.
Uterine Repositor	85	III.
Whitehead's Gum Knife	66	II.
Hoe	66	II.
Mouth Gag	60	II.
Paring Knife	66	II.
Pereosteotome	66	II.
Rectal Dilator	118	III.
Seizing Forceps	66	II.
Spiral Needle	66	II.
Staff and Knife	28	III.
Urethrotome	28	III.
Wight's Amputating Knife	4	I.
Artery Forceps	26	I.
Ligature Forceps	26	I.
Pocket Case	53	I.
Spray Cautery	2	S.
Wilde's Canulated Needle	32	II.
Canulated Forceps	32	II.
Canulated Scissors	32	II.
Ear Gorget	34	II.
Ear Specula	34	II.
Polypus Snare	45	II.
William's Lachrymal Dilator	7	II.
Lachrymal Probes	7	II.
Rectal Speculum	125	III.
Styles, Lachrymal	7	II.

	Page	Part
Winterich's Percussion Hammer	82	I.
Winternitz's Psychrophor	12	S.
Wire Adjuster	67	III.
Gauze Hip Splint	43	IV.
Gauze Splint, Byrd's	55	IV.
Iron, Suture	63	I.
Needles	63	I.
Silver, Suture	63	I.
Twister	72	III.
Twister	9	S.
Twisting Forceps	66	II.
Twisting Forceps	13	V.
Wisdom Tooth Forceps	2	V.
Wolverton's Tooth Forceps	4	V.
Wood's Artery Forceps	44	I.
Bisector, Lithotomy	38	III.
Circular Knife	4	I.
General Operating Case	13	I.
Pocket Case	47	I.
Staff, Lithotomy	38	III.
Torticollis Brace	14	S.
Trocar	47	III.
Truss	134	IV.
Woodward's Pessaries	5	S.
Pocket Case	55	I.
Speculum Vaginæ	54	III.
Uterine Douche	84	III.
Wound Dressing Cotton	56	IV.
Wrist, Contracted	135	IV.
Colle's Fracture	79	IV.
Wristlet, Elastic	53	IV.
Writers' Cramp, Apparatus	131, 132	IV.
Wry Neck, Torticollis Brace	6, 7	IV.
Wutzer's Hernia Instrument	126	III.
Wylie's Cervical Speculum	78	III.
Cervical Probe	78	III.
Yarrow's Enucleator	17	S.
Yearsley's Tonsil Knife	63	II.
Zaufal's Nasal Speculum	56	II.
Zwank's Pessary	88	III.

ERRATA.

Part I.—page 80. To contents Vance's Case, add 1 Urinometer.

“	“ 103.	Fig.	357,	Price,	$16.00,	should be,	**$18.00**
Price List—page	4,	Fig.	77,	“	3.50,	“	**3.00**
“	“ 5,	“	155, plated,	“	3.00,	“	**2.50**
“	“ 6,	“	193,	“	1.00,	“	**.75**
“	“ 7,	“	269,	“	8.00,	“	**7.50**
“	“ 7,	“	270,	“	5.00,	“	**4.50**
“	“ 7,	“	272,	“	15.00,	“	**8.00**
“	“ 7,	“	278,	“	15.00,	“	**10.00**
“	“ 8,	“	291,	“	6.50,	“	**10.00**
“	“ 8,	“	311,	“	6.50,	“	**10.00**
“	“ 8,	“	357,	“	16.00,	“	**18.00**
“	“ 12,	“	111,	“	1.75,	“	**1.50**
“	“ 13,	“	163, plated,	“	3.00,	“	**2.50**
“	“ 13,	“	181,	“	2.50,	“	**2.00**
“	“ 13,	“	194*a*,	“	.38,	“	**.75**
“	“ 14,	“	239,	“	1.25,	“	**1.50**
“	“ 14,	“	244,	“	2.75,	“	**2.50**
“	“ 15,	“	280,	“	9.00,	“	**8.00**
“	“ 15,	“	282,	“	2.25,	“	**3.00**
“	“ 15,	“	283,	“	5.50,	“	**5.00**
“	“ 16,	“	324,	“	12.00,	“	**8.00**
“	“ 16,	“	337,	“	3.00,	“	**3.50**
“	“ 16,	“	382,	“	7.00,	“	**6.00**
“	“ 16,	“	383,	“	6.00,	“	**5.00**
“	“ 16,	“	384,	“	.75,	“	**.20**
“	“ 17,	“	1, Ricord's,	“	2.50,	“	**4.00**
“	“ 19,	“	128,	“	30.00,	“	**35.00**
“	“ 19,	“	158*b*,	“	6.00,	“	**10.00**
“	“ 20,	“	181, Bumstead's,	“	3.50,	“	**3.00**
“	“ 20,	“	217,	“	10.50,	“	**10.00**
“	“ 21,	“	257,	“	4.00,	“	**3.00**
“	“ 21,	“	258,	“	4.00,	“	**3.00**
“	“ 22,	“	350,	“	6.00,	“	**9.00**
“	“ 22,	“	376,	“	2.25,	“	**2.00**
“	“ 22,	“	377,	“	11.00,	“	**10.00**
“	“ 23,	“	444*b*,	“	8.00,	“	**3.50**
“	“ 24,	“	482,	“	3.50,	“	**4.00**
“	“ 24,	“	529,	“	4.00,	“	**3.50**
“	“ 24,	“	540,	“	1.57,	“	**1.75**
“	“ 28,		Cotton Knee, each,	“	3.50,	“	**4.50**
“	“ 32,	“	75, same, Slide,	“	2.00,	“	**1.75**
“	“ 32,	“	109,	“	2.75,	“	**3.00**
“	“ 33,	“	30,	“	1.25,	“	**1.00**
“	“ 33,	“	58,	“	35.00,	“	**40.00**
“	“ 33,	“	64,	“	8.00,	“	**3.50**

THE AMERICAN

ARMAMENTARIUM CHIRURGICUM.

ILLUSTRATIONS OF MODERN SURGICAL INSTRUMENTS AND
APPLIANCES, ALSO, LISTS OF CASES OF INSTRUMENTS AS RECOMMENDED BY EMINENT
PROFESSORS OF SURGERY.

FIVE PARTS, SUPPLEMENT AND PRICE LIST.

GEORGE TIEMANN & CO.
67 CHATHAM STREET.
BRANCH STORE: STOHLMANN, PFARRE & CO.
107 EAST 28TH STREET,
NEW YORK.

PART I.

G. TIEMANN & CO.

WOODWARD'S POCKET SET — SEE LIST, PAGE 55.

Please do NOT MUTILATE this Book.

In ordering, merely state the Part of the Armamentarium, the Number of the Figure, and the Name of the article desired.

Instruments not mentioned in our Price List will be furnished at the lowest market rates.

When GOODS FOR REPAIR are directed to us, the Owner's Name and Address should accompany them. This will enable us to return them to the proper place and person.

Parties finding it convenient to order through dealers are requested to insist upon receiving our manufacture, as otherwise inferior goods are frequently substituted.

All instruments of our make have our name stamped upon them.

Geo. Tiemann & Co.'s Surgical Instruments.

No. 67 Chatham Street.

BRANCH STORE, NO. 107 EAST 28TH STREET,

NEW YORK.

No. I. SET OF AMPUTATING INSTRUMENTS.

Price, $25.00.

- 1 Liston's Knife, Hip and Thigh.
- 1 Liston's Knife, Leg and Arm.
- 1 Catling, small, Hand and Foot.
- 1 Scalpel.
- 1 Tenaculum.
- 1 Pair Artery Forceps.
- 1 Metacarpal Saw.
- 1 Capital Saw.
- 1 Tourniquet.
- 12 Needles, Silk, Wax, and Plastic Pins.
- 1 Pair Bone Forceps, g. st.
- 1 Mahogany Case lined with oil-dyed velvet.

No. II. SET OF AMPUTATING INSTRUMENTS.

Price, $30.00.

- 1 Liston's long Knife, Hip and Thigh.
- 1 Liston's medium Knife, Leg and Arm.
- 1 Catling.
- 1 Scalpel, chequered handle.
- 1 Tenaculum.
- 1 Capital Saw, Fig. 2.
- 1 Metacarpal Saw.
- 1 Pair spring-catch Artery Forceps, fenestrated.
- 1 Tourniquet.
- 12 Needles, Silk, Wax, and Plastic Pins.
- 1 Pair Liston's Bone Forceps, g. st.
- 1 Mahogany Case lined with oil-dyedvelvet.

No. III. SET OF AMPUTATING INSTRUMENTS.

Price, $35.00.

- 1 Liston's long Knife, Hips and Thigh.
- 1 Liston's medium Knife, Leg and Arm.
- 1 Catling, medium.
- 1 Scalpel, feruled.
- 1 Tenaculum, feruled.
- 1 Capital Saw, Fig. 2.
- 1 Metacarpal Saw, lifting back.
- 1 Pair slide-catch Artery Forceps, fenestrated.
- 1 Tourniquet.
- 12 Needles, Silk, Wax, and Plastic Pins.
- 1 Pair Liston's Bone Forceps, best.
- 1 Fine Rosewood Case, lined with oil-dyed velvet.

COMPACT AMPUTATING SET.

1 Parker's Knife, Fig. 8	$5.50
1 Catling, medium size	3.00
1 Finger Knife, French	2.00
1 Scalpel	0.75
1 Tenaculum	0.75
1 Amputating Saw, lifting back	4.00
1 Metacarpal Saw	1.50
1 Liston's Bone Forceps, best	3.00

F. A. Stohlmann. **Edward Pfarre.**

AMPUTATING.

FIG. 1.—Tiemann & Co.'s Bow Saw, with 2 blades.

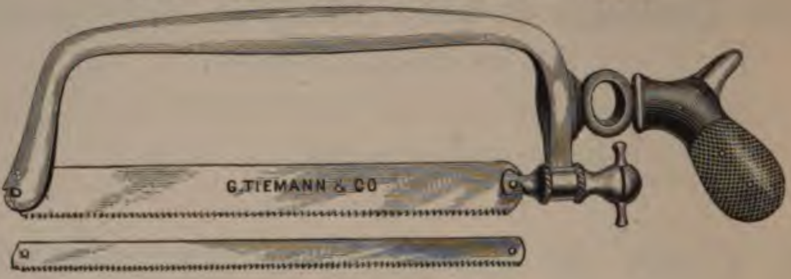


FIG. 1*b*.—Stohlmann's Rotating Saw.

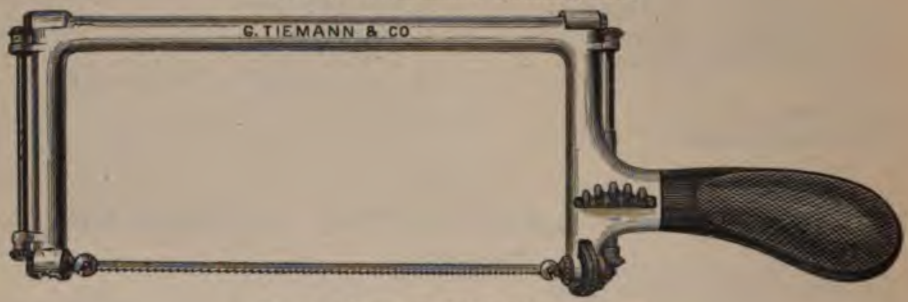


FIG. 2.—Tiemann & Co.'s Capital Saw.

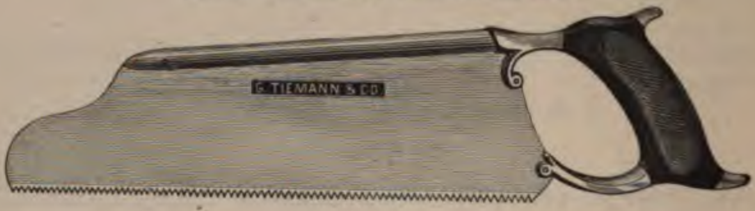

G. TIEMANN & CO.

FIG. 2*b*.—Satterlee's Capital Saw.

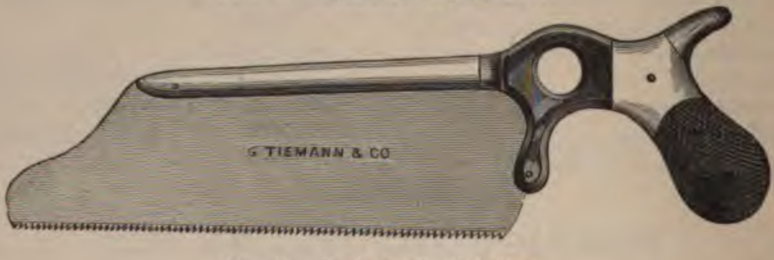
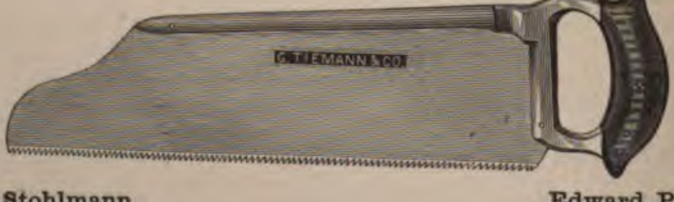


FIG. 2*c*.—Parker's Capital Saw.


G. TIEMANN & CO.

F. A. Stohlmann. **Edward Pfarre.**

1	Pair of fenestrated spring-catch Artery Forceps	$2.00
1	Tourniquet	2.00
12	Needles, Silk, Wax, Plastic Pins	1.00
1	Rosewood Case, lined with oil-dyed velvet	8.00
	Amount	$33.50

AMPUTATING AND TREPANNING SET.

1	Liston's long Knife, Hip and Thigh	$4.50
1	" medium Knife, Leg and Arm	3.50
1	Catling, Foot and Hand	2.50
1	Tenaculum	0.75
1	Scalpel	1.00
1	Elevator and Raspatory	1.50
1	Brush	0.25
1	Hey's Saw	1.75
1	Capital Saw	5.00
1	Metacarpal Saw	1.50
1	Galt's conical Trephine and handle	4.00
1	Pair spring-catch fenestrated Artery Forceps	2.00
1	Tourniquet	2.00
1	Pair Liston's Bone Forceps	3.00
12	Needles, Silk, Wax, Plastic Pins	1.00
1	Mahogany or Rosewood Case, lined as above	10.00
	Amount	$44.25

CAPITAL OPERATING SET.

1	Capital Saw	$5.00
1	Liston's long Knife or Catling, Hip and Thigh	5.00
1	" medium Knife or Catling, Leg and Arm	4.00
1	Short Catling or Breast Knife	2.00
1	Scalpel, chequered handle	1.00
1	Tenaculum	0.75
1	Pair fenestrated spring-catch Artery Forceps	2.00
1	Pair Liston's Bone Forceps	3.00
1	Elevator with Raspatory	1.50
1	Brush	0.25
1	Hey's Saw	1.75
1	Galt's conical Trephine and handle	4.00
1	Tourniquet	2.00
12	Needles, Silk, Wax, Plastic Pins	1.00
2	Small Scalpels, @ 75 cts.	1.50
1	Bistourie, sharp-pointed	1.00
1	Bistourie, probe-pointed	1.00

AMPUTATING AND TREPANNING.

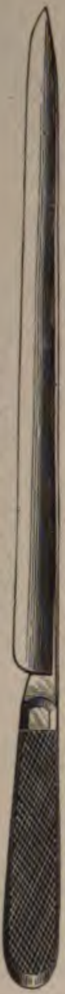


FIG. 7.—Liston's Long Knife.

FIG. 3.—Metacarpal Saw.

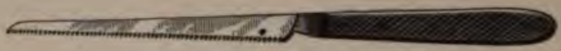


FIG. 4.—Small Catling.

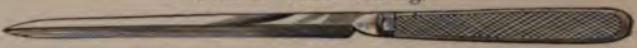


FIG. 5.—Liston's Small Knife.

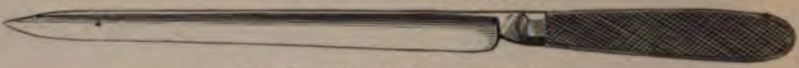


FIG. 6.—Wood's Circular Knife.

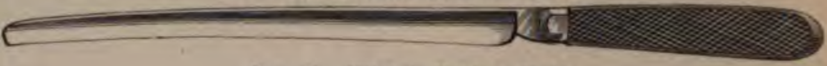


FIG. 6b.—Wight's Folding Knife.

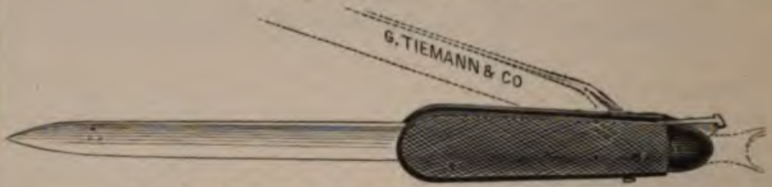
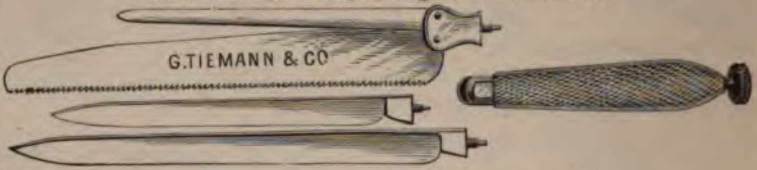


FIG. 9.—Conant's Amputating Saw and Knives.



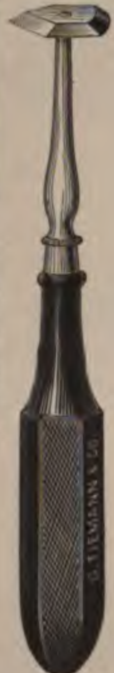


FIG. 13b.—Raspatory.

FIG. 10.—Trepanning Scalpel.

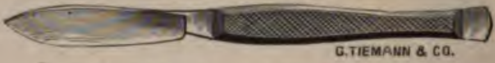

G.TIEMANN & CO.

FIG. 11.—Amputating Scalpel.

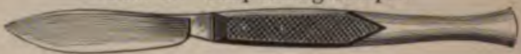


FIG. 11b.—Amputating Scalpel.

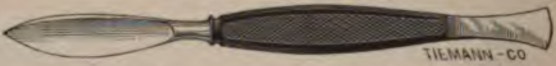


FIG 12.—Amputating Tenaculum.

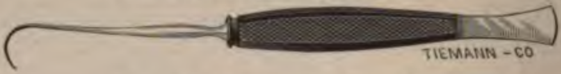


FIG. 12b.—Amputating Tenaculum.

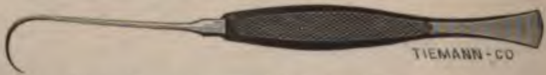
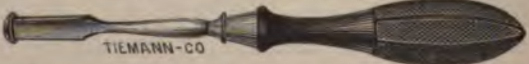


FIG. 13.—Lenticular Knife. (See p. 14.)



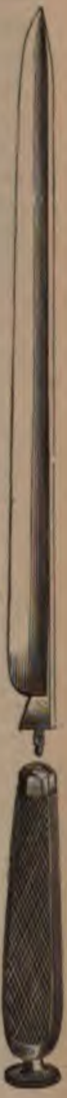


FIG. 8.—Parker's Knife.

Trephines, p. 12–20; Elevators, p. 10; Tirefond, p. 16.

1 Bistourie, finger	$1.00
1 Tenotome	1.00
1 Trocar and Canula	2.00
1 Aneurism Needle	0.75
1 Mahogany Case, lined with oil-dyed velvet	10.50
	Amount $52.00

BUCK'S GENERAL OPERATING SET.

1 Liston's long Knife, Hip and Thigh	$4.50
1 " medium Knife, Leg and Arm	3.50
1 Metacarpal Knife, large	2.00
1 Straight Bistourie, ferruled handle	1.25
1 Curved Bistourie, sharp point	1.25
1 Curved Bistourie, probe point	1.25
1 Hernia Bistourie	1.25
1 Tenotome	1.25
4 Scalpels, assorted sizes, @ $1.25	5.00
1 Tenaculum	1.25
1 Pair Crampton's Artery Needles	4.00
1 Double-pronged Hook	1.50
1 Beer's Cataract Knife	1.50
1 Desmarre's Scarifying Knife	1.50
1 Straight Eye Needle	1.25
1 Curved Eye Needle	1.25
1 Gouge and Spud for removing foreign bodies from the eye	2.00
1 Folding Probang with silver Bucket	2.50
1 Long Bullet Probe, German silver	0.50
1 Nelaton's Bullet Probe	0.60
1 Pair German silver Retractors	1.50
1 Double silver Trachea Tube	6.00
1 Curved Rongeur, with spring	3.50
1 Ferguson's Bone-Holding Forceps, lion jaw	3.00
1 Pair Liston's Bone Forceps	3.00
1 Pair Sequestra or Toe-nail Forceps	2.50
1 Small straight Trocar and Canula	2.00
1 Ferguson's Bone-holding Forceps, crow-bill	3.00
1 Rectum Trocar and Canula, curved,	3.00
2 Gouges @ $1.50	3.00
2 Chissels @ $1	2.00
1 Straight Trocar and Canula, large size,	2.00
1 Pair Lithotomy Forceps	2.50
1 Glass Ear Speculum	0.50
1 Tourniquet	2.00
4 Silver Catheters, Nos. 3, 6, 9, 12	8.00
1 Tiemann & Co.'s Bullet Forceps	2.25
1 Steel Director	0.60
1 Pair Coxeter's Forceps	1.00

AMPUTATING, TREPANNING AND MINOR OPERATING.

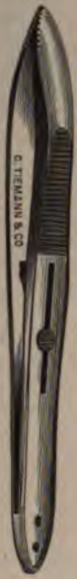
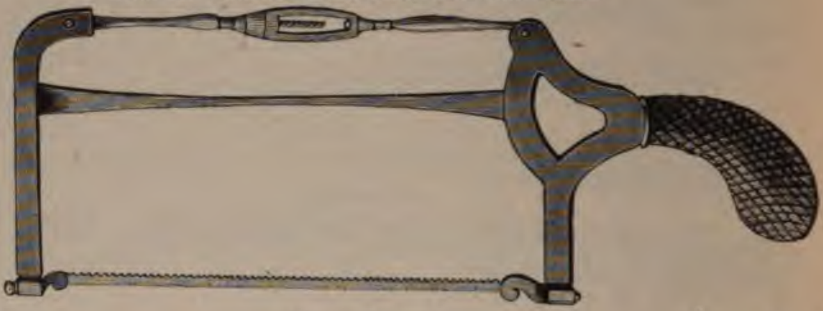
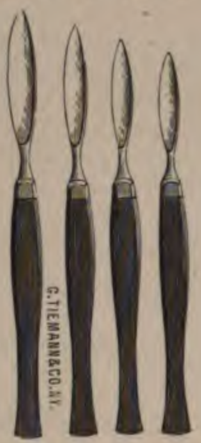


FIG. 15b. Langenbeck's Artery Forceps.

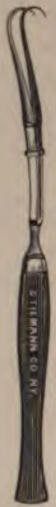
FIG. 16.—Butcher's Bow Saw, with two Blades.



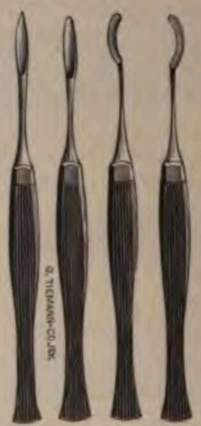
Operating Scalpels.
FIG. 17. 18. 19. 20.


G. TIEMANN & CO. N.Y.

Double Hook.
FIG. 21.


G. TIEMANN & CO. N.Y.

Tenotomes.
FIG. 22. 23. 24. 25.


G. TIEMANN & CO. N.Y.

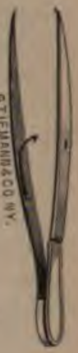

G. TIEMANN & CO. N.Y.

FIG. 15.—Liston's Artery Forceps.

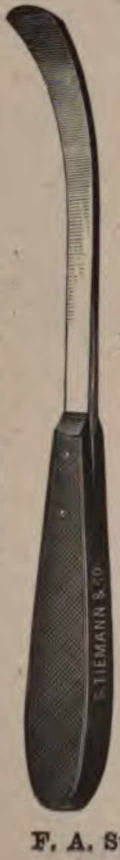
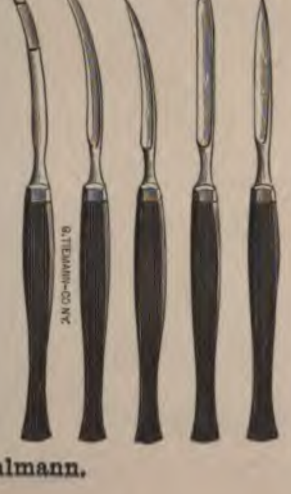
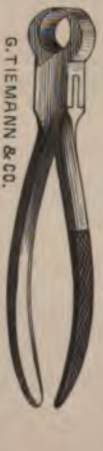


FIG. 14.—Hamilton's Levator.

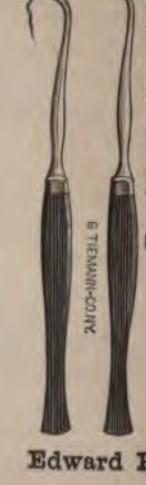
Bistouries.
FIG. 26. 27. 28. 29. 30.


G. TIEMANN & CO. N.Y.

Satterlee's
Bone
Forceps.
FIG. 31.


G. TIEMANN & CO.

Aneurism Needle
and Tenaculum.
FIG. 32. 33.


G. TIEMANN & CO. N.Y.

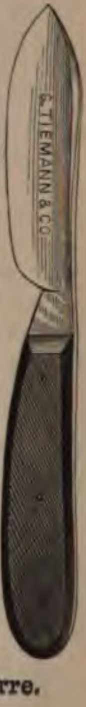


FIG. 14b.—Cartilage Knife.

F. A. Stohlmann. **Edward Pfarre.**

2	Vulcellum Forceps @ $2	$4.00
1	Pair Eye Scissors, curved on the flat	1.50
1	Pair heavy Scissors, angular curve	1.50
1	Lithotomy Bistourie	2.00
1	Wire Ecraseur	5.00
1	Pair Spring-catch Artery Forceps, fenestrated	2.00
1	Pair Buck's Throat Forceps	2.50
1	Pair Polypus Forceps	2.25
1	Pair Strabismus Forceps	1.25
1	Buck's Hernia Director	2.50
1	Capital Saw	5.00
1	Chain Saw, best	10.00
1	Trephine and handle	4.00
1	Metacarpal Saw, moveable back	3.00
1	Finger Saw, narrow blade	1.50
3	Lithotomy Staffs @ $2	6.00
3	Steel Bougies @ $1	3.00
1	Syme's Staff	2.00
1	Buck's Sponge-Holder	1.50
1	Germ. silver Eye Speculum	0.80
1	Odema Glottis Instrument	1.00
12	Needles, Silk, Wax, Plastic Pins	1.00
2	Coils silver Suture Wire and four coils iron Wire	1.00
3	Silver Probes @ 38 Cts	1.14
6	Serrefines @ 25 Cts	1.50
1	Mahogany or Rosewood Case, brass bound, good French lock, lined with silk velvet, neatly arranged	29.00
1	Patent-leather Cover, water-proof	5.00
	Amount	$191.39

BLACKMAN'S GENERAL OPERATING SET.

1	Liston's long Knife, handle to unscrew	$5.50
1	" medium Knife	4.00
1	Catling	2.50
1	Straight Finger Knife	1.25
1	Capital Saw	5.00
1	Aneurism Needle	1.25
1	Tenaculum	1.25
1	Narrow Finger Saw	1.50
1	Lead Mallet	2.50
1	Lithotomy Staff	2.00
1	Chisel	1.00
1	Gouge	1.50
1	Rongeur with spring	3.50
1	Pair Liston's Bone Forceps, large, with spring	4.00
1	Elevator and Raspatory	1.50
1	Sequestrum Forceps	2.50

OSTEOTOMY.

FIG. 34.—Brainard's Bone Drills.

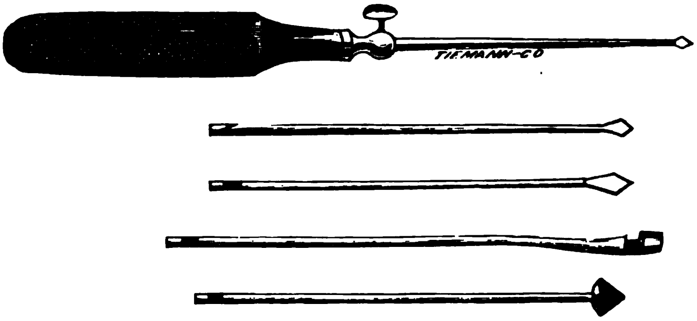


FIG. 34*b*.—Tiemann & Co.'s Drill Stock.

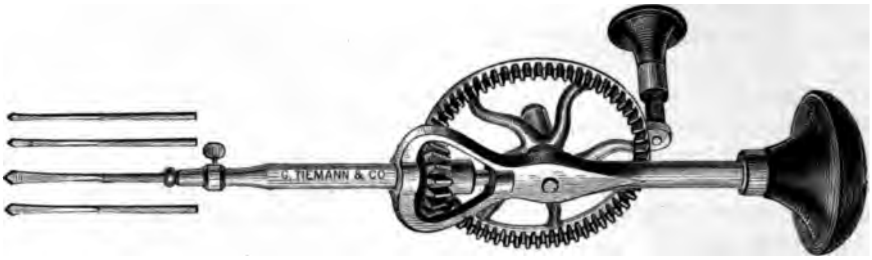


FIG. 35.—Hamilton's Improved Bone Drills.

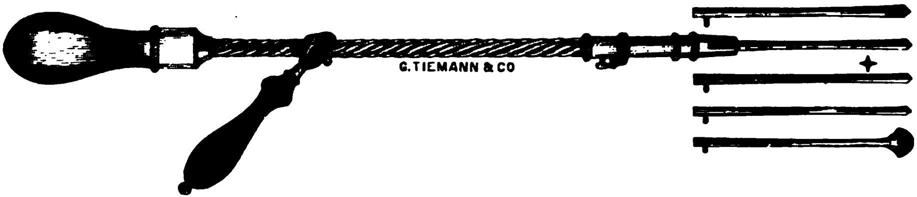
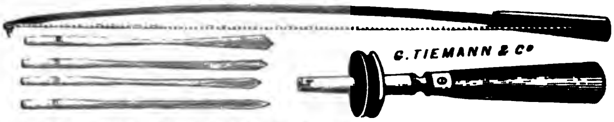


FIG. 36.—Howard's Bone Drills.



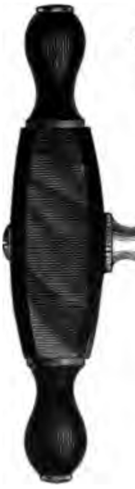


FIG. 36*b*.—Buck's Drills for the Mastoid Process.

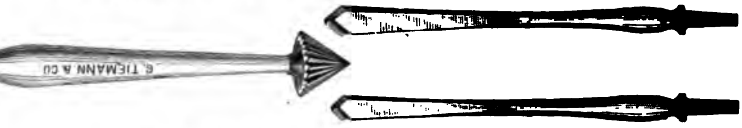


FIG. 37.—Sands' Pereosteotome.

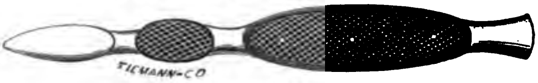
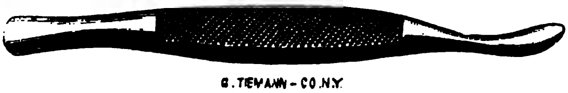


FIG. 38.—Sayre's Pereosteotome.


G. TIEMANN - CO. N.Y.

OSTEOTOMY.

FIG. 34.—Brainard's Bone Drills.

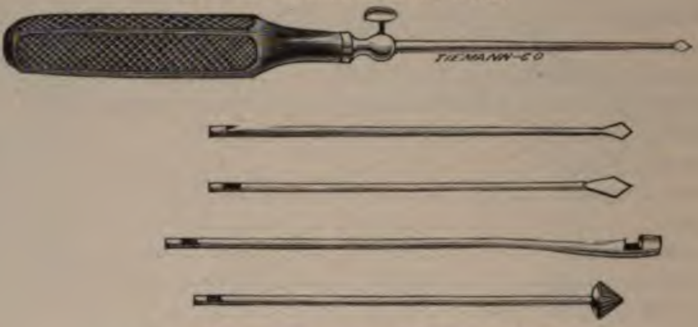


FIG. 34b.—Tiemann & Co.'s Drill Stock.

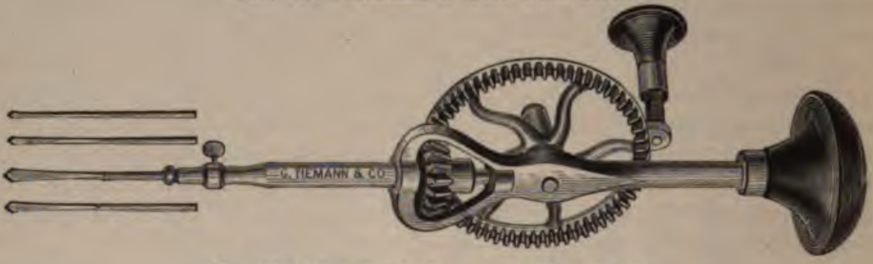


FIG. 35.—Hamilton's Improved Bone Drills.

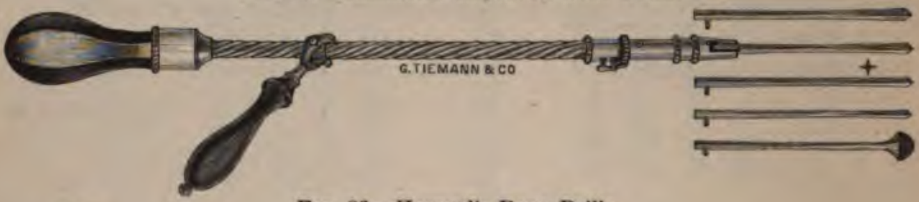


FIG. 36.—Howard's Bone Drills.

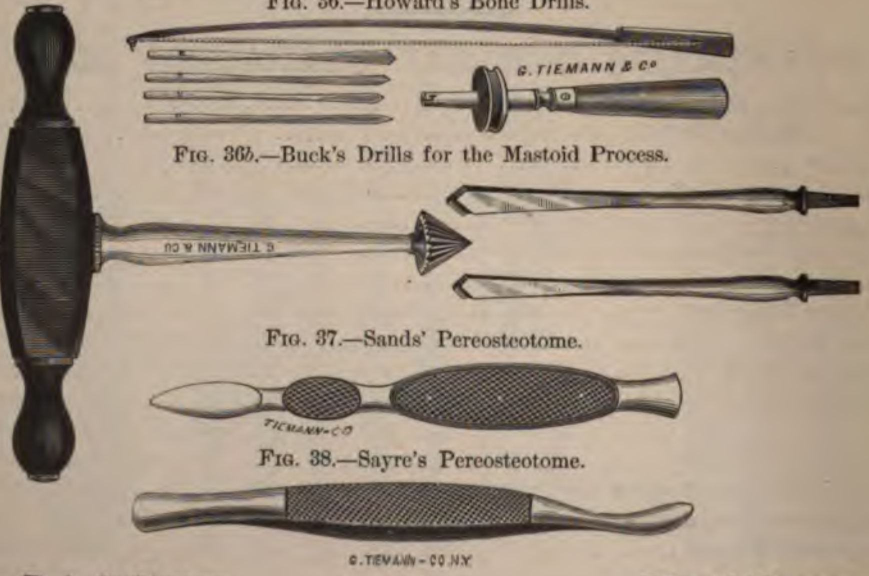


FIG. 36b.—Buck's Drills for the Mastoid Process.

FIG. 37.—Sands' Pereosteotome.

FIG. 38.—Sayre's Pereosteotome.

1	Lion-Jaw Bone-holding Forceps	$3.00
1	Tiemann & Co.'s Bullet Forceps	2.25
1	Universal Forceps, crossing	2.00
1	Double Silver Trachea Tube	6.00
1	Lead Bullet Probe	0.50
2	Scalpels, with Ferules @ $1.25	2.50
1	Curved sharp-pointed Bistourie	1.25
1	Curved probe-pointed Bistourie	1.25
1	Hernia Knife	1.25
2	Blackman's Retractors	3.00
18	Needles, Silk, Wax, Plastic Pins, Silver Wire, Iron Wire	2.00
2	Silver Catheters	4.00
1	Gum Elastic Catheter	0.50
1	Straight Trocar	2.00
1	Chain Saw, best	10.00
1	Galt's Trephine and Handle	4.00
1	Spiral Tourniquet	2.00
1	Steel Director	0.60
2	Silver Probes	0.75
1	Eye-Needle and Scoop on one handle	2.50
1	Pair Strabismus Forceps	1.25
1	Pair Dressing Scissors	1.25
1	Pair Dressing Forceps	1.50
1	Wire Eye Speculum	0.80
1	Double-current Catheter, silver	6.00
1	Nelaton's Probe	0.60
1	Horn Screw, to open jaw	1.25
1	Pair Artery Forceps, slide catch	2.50
1	Rosewood Case, brass bound, lined with oil-dyed patent velvet	25.00
1	Patent leather Cover, water-proof	4.50
		$136.75

HAMILTON'S GENERAL OPERATING SET.

1	Long Catling, Hip, 16 inches long	5.50
1	Long Catling, Thigh, 18 inches long	4.50
1	Liston's Knife, Leg and Arm, 13 inches long	3.50
1	Broad French Bistourie	2.00
1	Narrow French Bistourie	2.00
1	Probe-pointed Bistourie, ferule handle	1.25
1	Pair Liston's Bone Forceps	3.00
1	Capital Saw	5.00
1	Narrow Metacarpal Saw	1.50
1	Tenaculum	1.25
1	Pair slide-catch Artery Forceps, Tortion	2.50
1	Pair spring-catch Artery Forceps, fenestrated	2.00
1	Pair Dressing Scissors, straight	1.25

OSTEOTOMY.

FIG. 39.—Ferguson's Lion-Jaw Bone Holding Forceps.

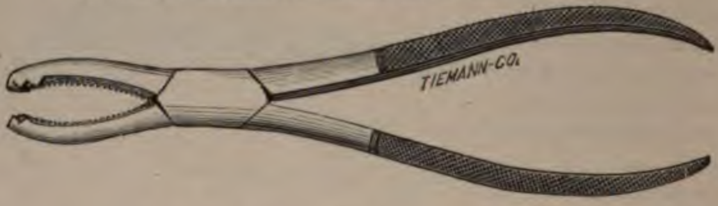


FIG. 39b.—Ferguson's Sequestrum Forceps.

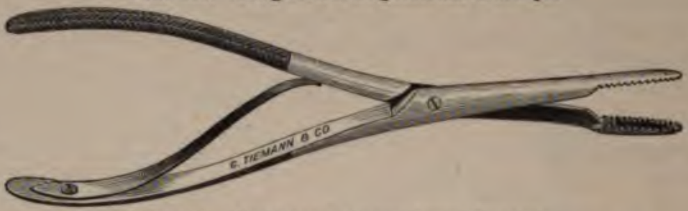


FIG. 45b.—U. S. A Raspatory.

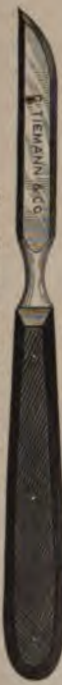


FIG. 45.—Plain Trepanning Elevator.

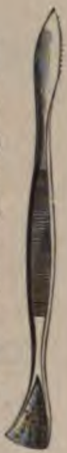


FIG. 40.—Hamilton's Sequestrum Forceps.

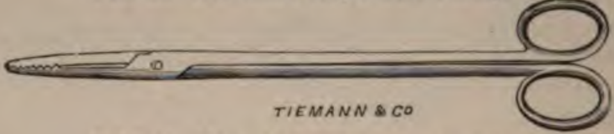


FIG. 41.—Liston's Bone Forceps, straight.

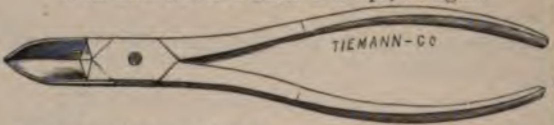


FIG. 42.—Liston's Bone Forceps, curved on the flat.

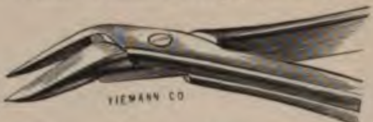


FIG. 43.—Liston's Bone Forceps, knee curve.

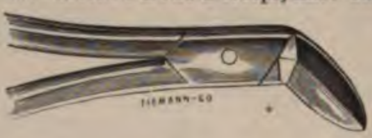


FIG. 44.—Trepanning Elevator and Raspatory.

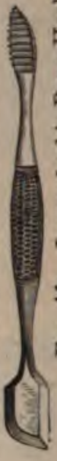


FIG. 44b.—Langenbeck's Bone Hook and Levator.

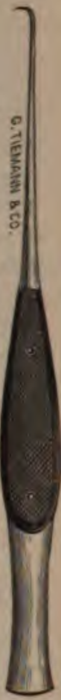
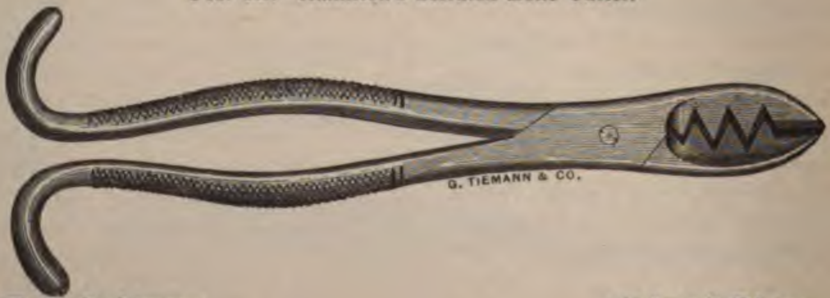


FIG. 43b.—Hamilton's Serrated Bone Cutter.



F. A. Stohlmann. **Edward Pfarre.**

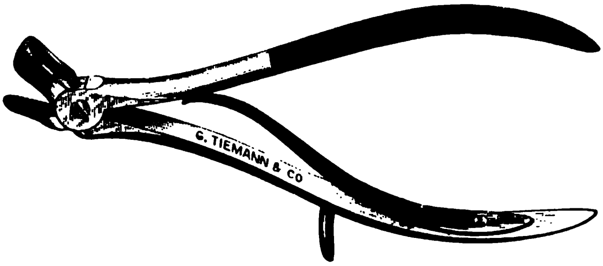
1 Pair strong Harelip Scissors	$1.50
1 Pair Dressing Forceps	1.50
1 Pair Tiemann & Co. Bullet Forceps	2.25
1 U. S. A. Bullet Forceps	2.00
1 German silver or whalebone Bullet Probe	0.75
6 Serrefine's, @ 25 Cts.	1.50
12 Needles, Silk, Wax, Plastic Pins	1.00
1 Spiral Tourniquet	2.00
1 Field Tourniquet	1.00
1 Long Director and Ear Spoon	0.60
1 Conical Trephine	8.00
1 Bone Trephine	
1 Trephine Handle	
1 Trepanning Elevator with Raspatory	1.50
1 Hey's Saw	1.75
1 Tirefond	1.75
1 Hard-rubber Dental Syringe	1.00
1 Set Mott's Aneurism Needles	2.75
1 Pair plain Artery Forceps	0.75
1 Pair Mott's Retractors	1.50
1 Pair long Cotton Forceps (bird stuffing)	1.50
3 Acupressure Needles, @ 25 Cts	0.75
1 Metal Bougie	0.75
2 Silver Catheters	4.00
1 Mahogany Case, brass bound, lined with oil-dyed patent velvet	22.00
1 Patent leather Cover, water-proof	4.50
	$101.85

POST'S GENERAL OPERATING SET.

1 Granger's Sponge-Holder, gilt	$2.50
1 Pair Dressing Forceps	1.50
1 Pair Polypus Forceps	2.25
1 Pair Strabismus Scissors	1.50
1 Pair Strabismus Forceps	1.25
1 Set Mott's Aneurism Needles	2.75
1 Pair Angular Scissors, heavy	1.50
1 Kramer's Ear Speculum, best steel and German silver	3.00
1 Pair Liston's Bone Forceps, larger than usual	4.00
1 Silver Female Catheter	1.00
1 Metacarpal Saw	1.50
6 English Gum Elastic Catheters	2.50
1 Medium-sized Trocar and Canula	2.00
1 Probang, with Silver Bucket	3 50
1 Nelaton's Probe	0.60
1 Pair Cilia Forceps	1.25

OSTEOTOMY.

FIG. 46.—Hoffman's Gouge Forceps.



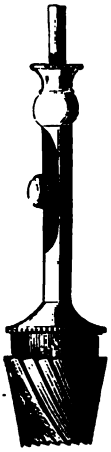


FIG. 48.—Galt's Trephine.

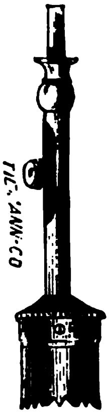


FIG. 47.—Crown Trephine.

FIG. 49.—Trephine Handle.

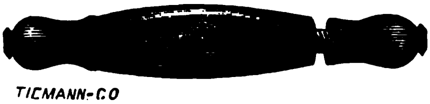


FIG. 50.—Pope's Antrum Drill.

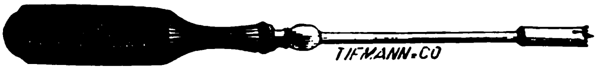


FIG. 51.—Hey's Saw.

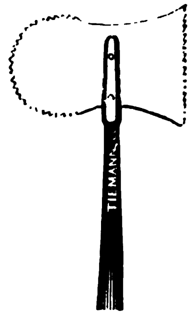


FIG. 52.—Hey's Saw.

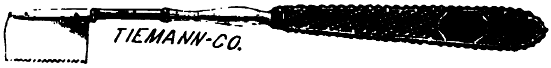
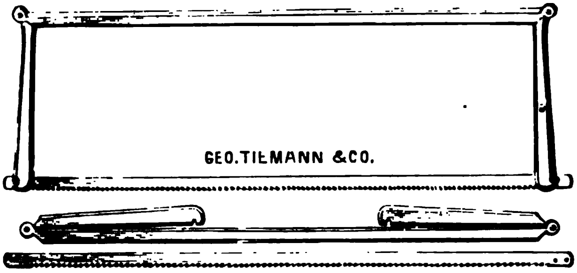


FIG. 53d.—Lewis' Folding Saw.



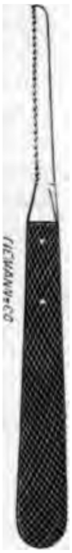


FIG. 53.—Detmold's Metacarpal Saw.

FIG. 53b. Farabeuf's Osteophor.

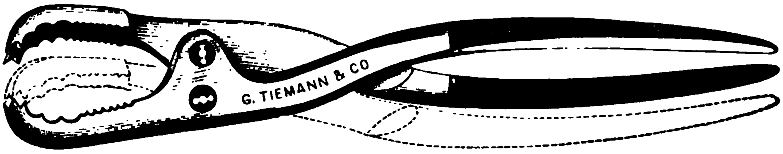
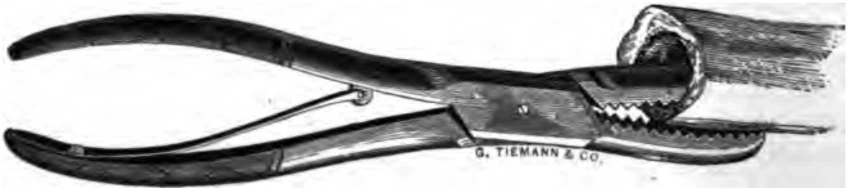


FIG. 53c.—Hamilton's Osteophor.



OSTEOTOMY.

FIG. 46.—Hoffman's Gouge Forceps.

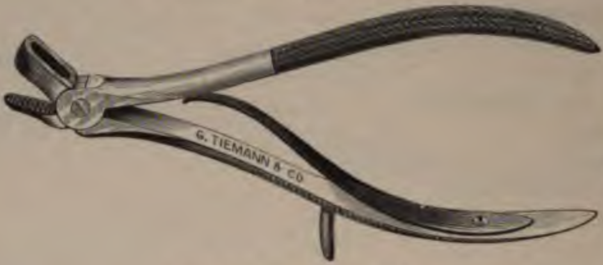


FIG. 48.—Galt's Trephine.

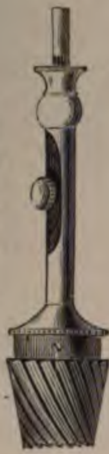


FIG. 47.—Crown Trephine.

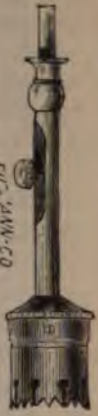


FIG. 49.—Trephine Handle.

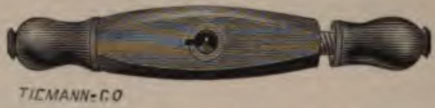


FIG. 50.—Pope's Antrum Drill.

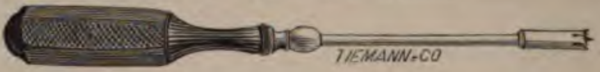


FIG. 51.—Hey's Saw.

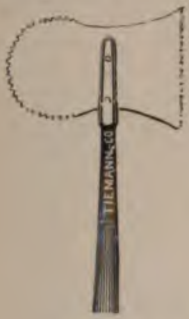


FIG. 52.—Hey's Saw.

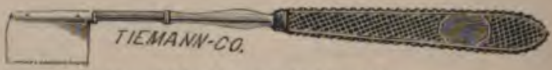


FIG. 53d.—Lewis' Folding Saw.

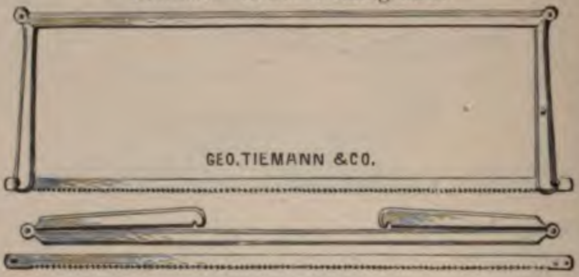

GEO.TIEMANN &CO.

FIG. 53.—Detmold's Metacarpal Saw.

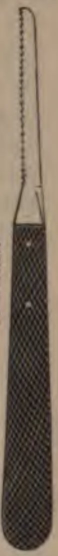


FIG. 53b. Farabeuf's Osteophor.

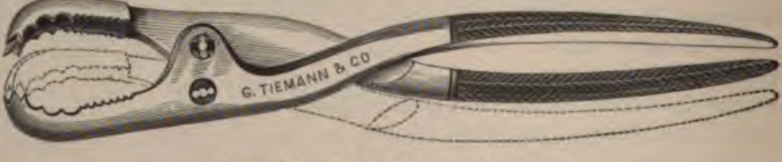
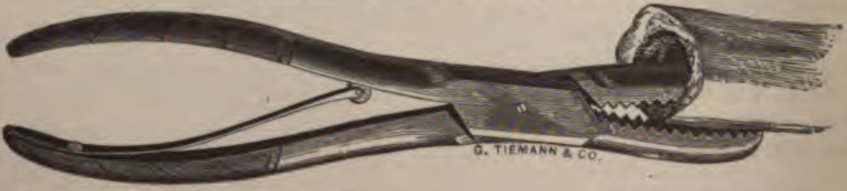


FIG. 53c.—Hamilton's Osteophor.


G. TIEMANN & CO.

F. A. Stohlmann. **Edward Pfarre.**

1 Sharp-pointed curved Bistourie, with ferule	$1.25
1 Finger Bistourie	1.25
3 Scalpels, assorted sizes, @ $1.25	3.75
1 Tenaculum	1.25
1 Trepanning Scalpel and Raspatory	1.75
1 Long Amputating Knife	4.50
1 Blunt Hook	1.25
2 Coils Silver Wire and Silk	1.20
1 Metal Bullet Probe	0.50
1 Uvula Scissors, with claws	3.00
1 Galt's Trephine 1 Bone Trephine 1 Trephine Handle	8.00
1 Ebony Gorgeret	1.50
1 Pair Coxeter's Forceps	1.00
1 Pair Dressing Scissors	1.25
1 Trepanning Elevator	1.25
1 Pair spring-catch Artery Forceps, plain	1.50
1 Rongeur	3.50
1 Double Trachea Tube, silver	6.00
1 Pair Entropium Forceps	2.50
1 Silver Catheter, No. 9	2.25
1 Hey's Saw	1.75
1 Pair Mott's Retractors	1.50
1 Japanned Tongue Depressor	1.25
1 Rectum Trocar	3.00
1 Pair Sequestrum Forceps, toe-nail	2.50
1 Wire Eye Speculum	0.80
1 Tiemann & Co.'s Bullet Forceps	2.25
1 Lachrymal Needle	1.25
1 Tenotome	1.25
1 Probe-pointed Bistourie	1.25
1 Straight and 1 curved Eye Needle, @ $1.25	2.50
1 Beer's Cataract Knife	1.50
1 Medium-size Amputating Knife	3.50
12 Suture Needles, Silk, Wax, Plastic Pins	1.00
2 Silver Probes	0.75
1 Director	0.60
1 Pair Vulcellum Forceps	2.25
1 Rosewood brass-bound Case, lined with silk velvet	29.00
1 Patent leather Cover, water-proof	5.00
1 Capital Saw	5.00
Amount	$150 95

WOOD'S GENERAL OPERATING SET.

1 Pair Silver Probes	$0.75
2 Steel Sounds, @ $1	2.00
1 Long Amputating Knife	4.50

OSTEOTOMY.

FIG. 54.—Szymanowski's Bone Exsecting Saw, improved by Tiemann & Co.

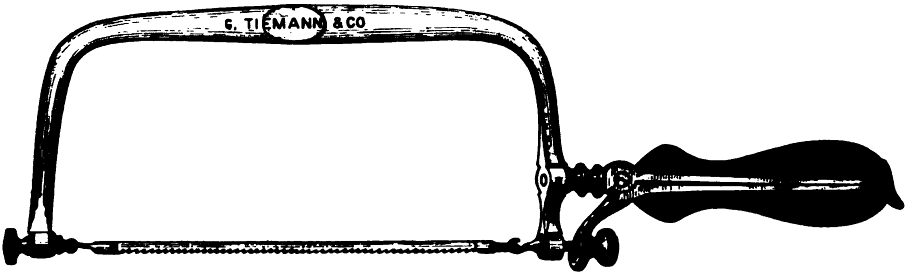


FIG. 55.—Chain Saw.

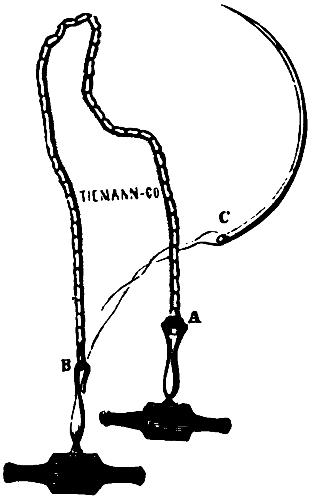


FIG. 56.—Chain Saw Carrier.

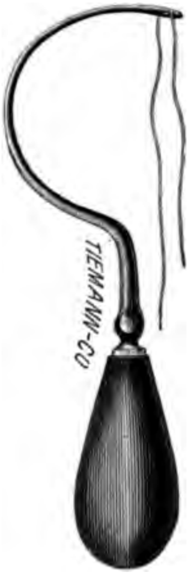


FIG. 57.—Tiemann & Co.'s Circular Saw.

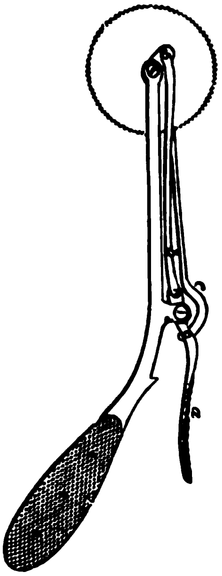


FIG. 59.—Trepanning Elevator and Lenticular Knife.

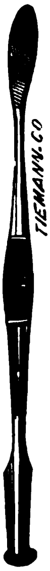


FIG. 60.—Lente's Interosseous Saw.

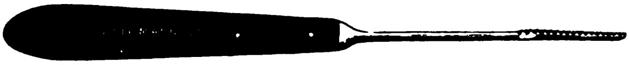


FIG. 60b.—Buck's Chain Saw Conductor.

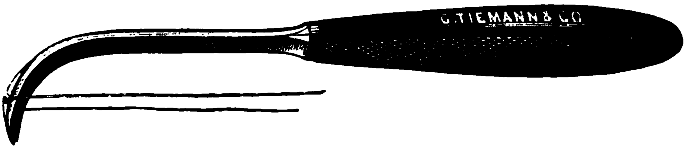


FIG. 61.—Bone Drill for Un-united and Oblique Fractures.

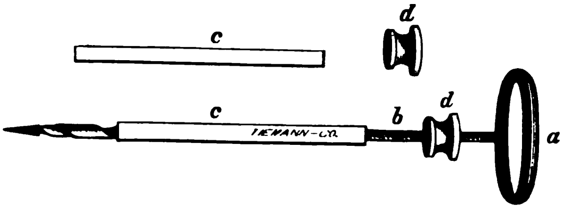
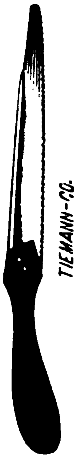


FIG. 58.—Lifting-back Metacarpal Saw.



1	Circular Knife	$4.00
1	Catling	2.50
1	Trepanning Scalpel with Raspatory	1.75
1	Spiral Tourniquet	2.00
12	Needles, Silk, Wax, Plastic Pins	1.00
1	Trepanning Brush	0.25
1	Metacarpal Saw	1.50
1	Tiemann & Co.'s Bullet Forceps	2.25
1	Pair straight Dressing Scissors	1.25
1	Pair curved Eye Scissors	1.50
1	Hey's Saw	1.75
1	Silver-plated Catheter	1.25
1	Gum-elastic Catheter	0.50
2	Gum-elastic Bougies	1.00
1	Capital Saw	5.00
1	Pair Liston's Bone Forceps	3.00
1	Trephine and Handle, Galt's	4.00
1	Pair spring-catch Artery Forceps, plain	1.50
1	Trepanning Elevator	1.25
1	Director, steel	0.60
1	Beer's Cataract Knife	1.50
1	Curved sharp-pointed Bistourie	1.00
1	Curved probe-pointed Bistourie	1.00
2	Scalpels, @ 75 Cts.	1.50
1	Plain Aneurism Needle	0.70
1	Tenaculum	0.75
1	Strabismus Blunt Hook	1.25
1	Straight Eye Needle	1.25
1	Curved Eye Needle	1.25
1	Curved Eye Forceps, Strabismus	1.25
1	Rosewood, brass bound Case, lined with oil-dyed patent velvet	18.00
	Amount	$74.55

PARKER'S GENERAL OPERATING SET.

1	Liston's Amputating Knife, screw handle	$5.50
1	Liston's Amputating Knife, medium size	3.50
1	Small Catling	2.00
1	Capital Saw	5.00
1	Metacarpal Saw	1.50
1	German silver Wire Eye Speculum	0.80
1	Hey's Saw	1.75
1	Trepanning Elevator and Raspatory	1.50
1	Galt's Trephine and Handle	4.00
1	Finger Knife	1.25
1	Curved probe-pointed Bistourie	1.25
1	Curved sharp-pointed Bistourie	1.25

OSTEOTOMY.

FIG. 62.—Prince's Retractor.

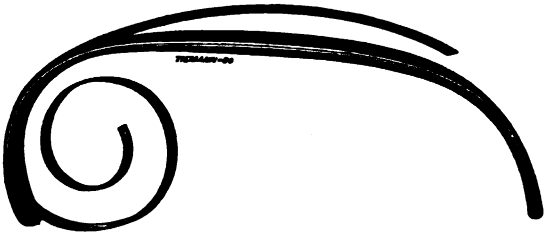


FIG. 63.—Prince's Bone Staff.

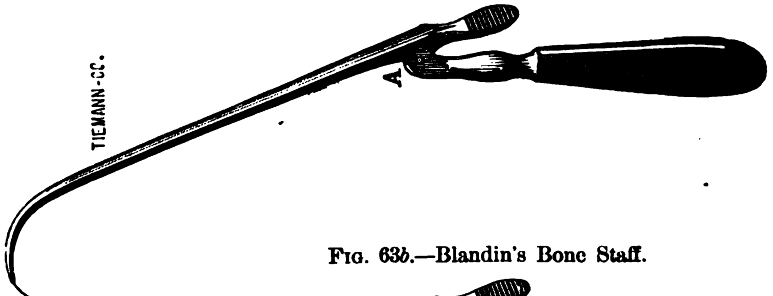


FIG. 63b.—Blandin's Bone Staff.

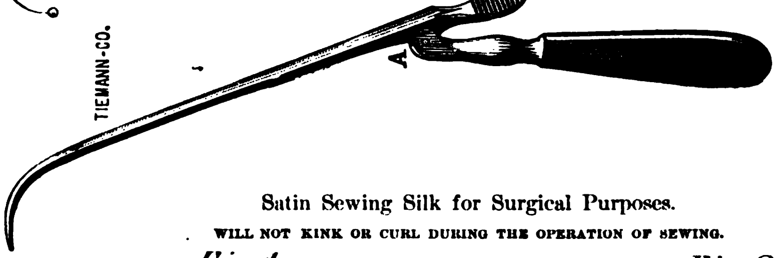
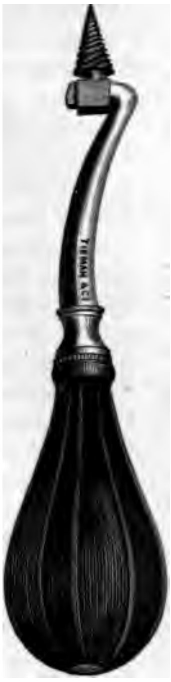


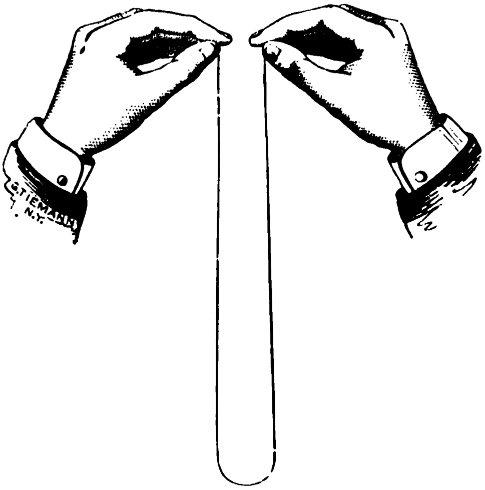
FIG. 64.—Tirefond.



Satin Sewing Silk for Surgical Purposes.

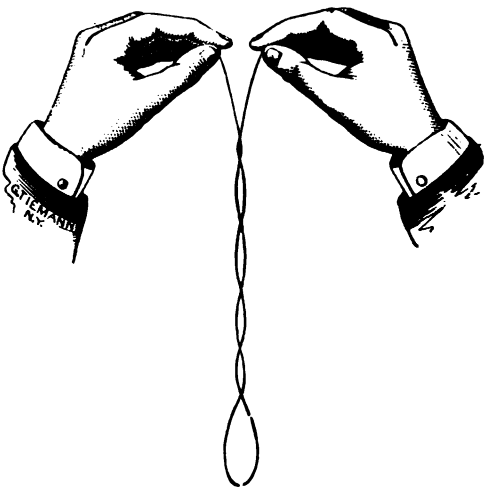
WILL NOT KINK OR CURL DURING THE OPERATION OF SEWING.

Fig 1.


G. TIEMANN N.Y.

The Plaited Satin Sewing Silk.

Fig 2.


G. TIEMANN N.Y.

The Ordinary Twisted Silk.

Suture Needles, page 63.

F. A. Stohlmann. **Edward Pfarre.**

1	Cooper's Hernia Knife	$1.25
3	Scalpels, assorted, @ $1.25	3.75
1	Cataract Knife	1.50
1	Parker's Lachrymal Needle	1.50
1	Exploring Trocar	1.50
1	Director, steel	0.60
1	Pair Probes, silver	0.75
1	Tiemann & Co.'s Bullet Forceps	2.25
1	Tenotome	1.25
1	Pair Parker's Retractors	1.50
12	Needles, Silk, Silver Wire, Plastic Pins	1.50
1	Small Trocar, straight	2.00
1	Rectum Trocar, curved	3.00
1	Pair Artery Forceps, plain	0.75
1	Pair Polypus Forceps	2.25
1	Steel Sound	1.00
2	Lithotomy Staffs, @ $2.00	4.00
1	Lithotomy Bistourie	2.00
1	Pair Lithotomy Forceps	2.50
1	Pair Liston's Bone Forceps	3.00
1	Pair Eye Scissors, curved on the flat	1.50
2	Silver Catheters, @ $2	4.00
1	Spiral Tourniquet	2.00
1	Eye Needle, curved	1.25
1	Set Parker's Aneurism Needles	2.75
1	Pair Strabismus Forceps	1.25
1	Pair Artery Forceps, spring-catch, plain	1.50
1	Rosewood Case, brass bound, lined with silk velvet	20.00
1	Patent-leather Cover, water-proof	3.50
	Amount	$104.90

MARKOE'S GENERAL OPERATING SET.

1	Liston's Knife, long	$4.50
1	Liston's Knife, medium	3.50
1	French Finger Knife, long	2.00
1	Straight Bistourie, sharp-pointed	1.00
1	Curved Bistourie, sharp-pointed	1.00
1	Curved Bistourie, probe-pointed	1.00
1	Cooper's Hernia Knife	1.00
2	Scalpels, assorted, @ 75 cts.	1.50
1	Tenotome	1.00
1	Tenaculum	0.75
1	Aneurism Needle	0.70
12	Needles, Silk, Wax, Plastic Pins	1.00
1	Tourniquet	2.00
1	Chisel	1.00

OSTEOTOMY.

FIG. 65.—Maxillæ Saw.
(*right.*)

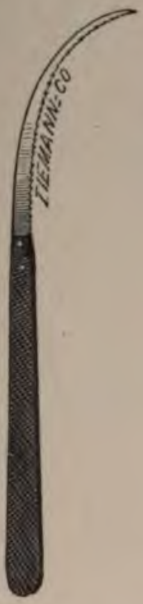


FIG. 66.—V. Graefe's Circular Saw.

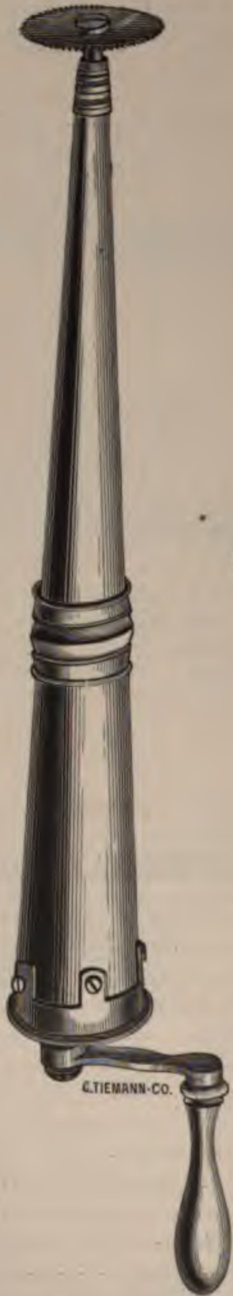

G.TIEMANN-CO.

FIG. 67.—Maxillæ Saw.
(*left.*)

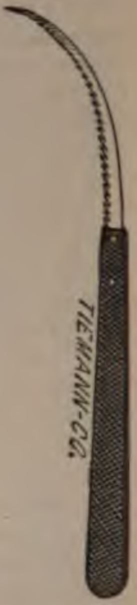


FIG 68 —Costotome or Rib Shears.

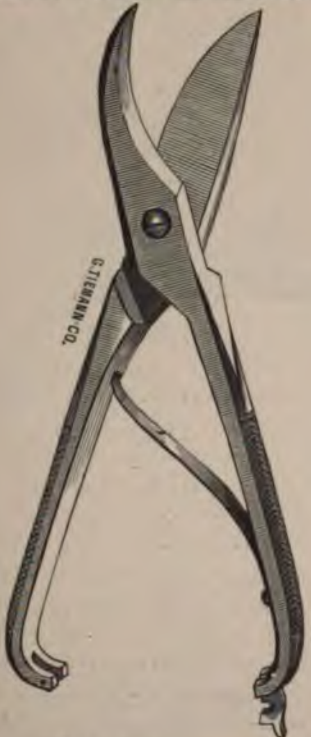
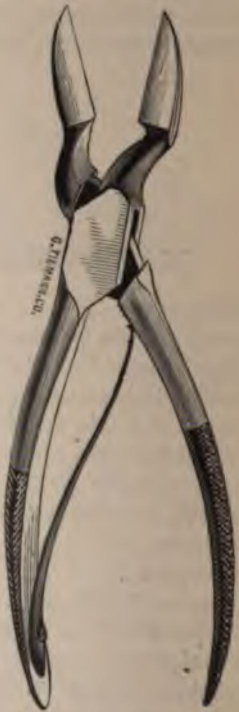

G.TIEMANN-CO.

FIG. 69.—Isaac's Bayonet-shaped Bone-Forceps.


G.TIEMANN-CO.

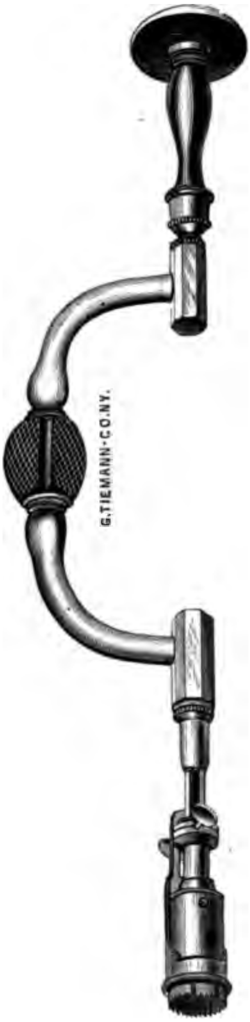
F. A. Stohlmann. **Edward Pfarre.**

1	Metacarpal Saw	$1.50
1	Hey's Saw	1.75
1	Trepanning Elevator and Raspatory	1.50
1	Pair Artery Forceps, plain	0.75
1	Pair Artery Forceps, spring-catch, fenestrated	2.00
1	Pair Vulcellum Forceps, long	2.50
1	Pair Toe-nail Forceps	2.50
1	Capital Saw	5.00
1	Galt's Trephine and Handle	4.00
1	Pair Parker's Retractors	1.50
1	Pair Liston's Bone Forceps	3.00
1	Gouge	1.50
1	Silver Catheter, male	2.00
1	Steel Sound	1.00
1	Rosewood Case, lined with oil-dyed patent velvet	15.00
	Amount	$67.45

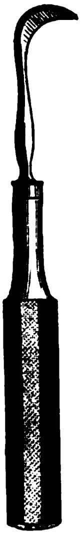
CONANT'S AMPUTATING AND MINOR OPERATING SET.

1	Amputating Knife, long	$12.00
1	Amputating Knife, small	
1	Amputating Saw, small	
1	Handle, to fit the above	
1	Double Hook	1.50
1	Bistourie, probe-pointed	1.25
1	Hernia Knife	1.25
1	Bistourie, sharp-pointed	1.25
2	Scalpels, assorted, @ $1.25	2.50
1	Tenotome	1.25
2	Parker's Retractors	1.50
1	Director, steel	0.60
1	Nelaton's Bullet Probe	0.60
1	Caustic Holder	1.00
1	Pair Scissors, straight	1.25
1	Pair Scissors, curved on the flat	1.50
1	Pair Tiemann & Co.'s Bullet Forceps	2.25
1	Pair Polypus Forceps, curved, small	2.00
1	Pair Satterlee's Bone Forceps, small	2.50
1	Compound Catheter, male and female, German silver	2.00
2	Silver Probes	0.75
12	Needles, Silk, Wax, Plastic Pins	1.00
1	Pair Artery Forceps, spring-catch, fenestrated	2.00
1	Tourniquet	2.00
1	Rosewood Case, lined with oil-dyed velvet	12.00
	Amount	$53.95

Fig. 72.
Brace Trepan and guarded Crown.


G.TIEMANN-CO.N.Y.

Figs. 70, 71.
Goodwillie's Pereosteum Levators.



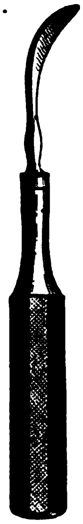


Fig. 73.
Mott's Retractor.

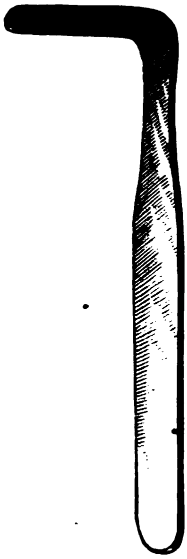


Fig. 74.
Blackman's Retractor.

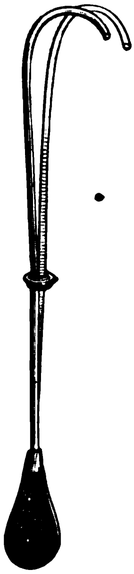


Fig. 76.
Parker's Retractor.

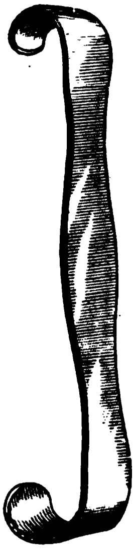
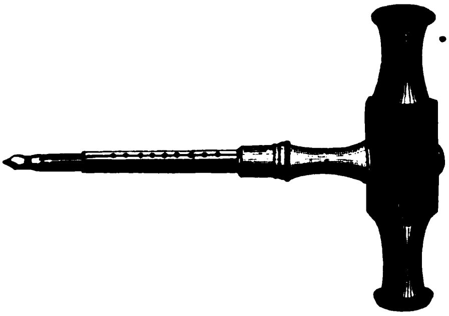


Fig. 75.
Hand Trepan for guarded Trephines.



F. A. Stohlmann. **Edward Pfarre.**

CALIFORNIA GENERAL OPERATING SET.

1	Capital Saw	$5.00
1	Amputating Knife, long	4.50
1	Amputating Knife, medium	3.50
1	Small Catling	2.00
1	Scalpel	0.75
1	Elevator and Raspatory	1.50
1	Pair Artery Forceps, spring-catch, plain	1.50
1	Pair Artery Forceps, slide-catch, bulbous points	1.50
1	Tourniquet	2.00
1	Trocar, straight	2.00
1	Tongue Depressor, japanned	1.25
1	Pair Liston's Bone Forceps, g. st.	2.50
1	Galt's Trephine and Handle	4.00
1	Steel Director	0.60
1	Straight Bistourie	1.00
1	Curved Bistourie, probe-pointed	1.00
1	Curved Bistourie, sharp-pointed	1.00
3	Scalpels, assorted sizes, @ 75 cts.	2.25
1	Tenotomy Knife	1.00
1	Aneurism Needle	0.70
1	Pair Polypus Forceps	2.25
1	Hey's Saw	1.75
1	Metacarpal Saw	1.50
1	Pair Dissecting Scissors	0.75
1	Double Hook	1.50
1	Green's Tonsil Bistourie	1.50
12	Needles, Silk, Wax, Plastic Pins	1.00
1	Probang	0.50
1	Catheter, German silver, plated	1.25
1	Metal Bougie	0.50
1	Pair Tiemann & Co.'s Bullet Forceps	2.25
1	Mahogany Case, lined with oil-dyed velvet	15.00
	Amount	$69.80

DETMOLD'S GENERAL OPERATING SET.

1	Finger Saw, narrow blade	$1.50
1	Tiemann & Co.'s Bullet Forceps	2.25
1	Pair Polypus Forceps	2.25
1	Steel Director	0.60
1	Elevator and Raspatory, or Lenticular Knife	1.50
2	Probes, silver	0.75
1	Acupressure Needle	0.25
1	Trepanning Brush	0.25
1	Bullet Probe, lead	0.50

OSTEOTOMY.

FIG. 77.—Ferguson's Lion-jaw Bone-holding Forceps.

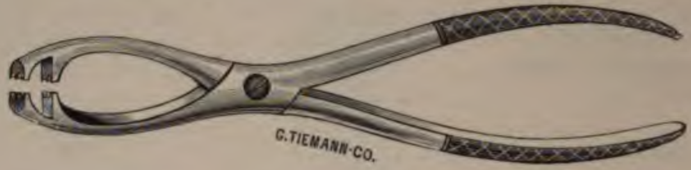
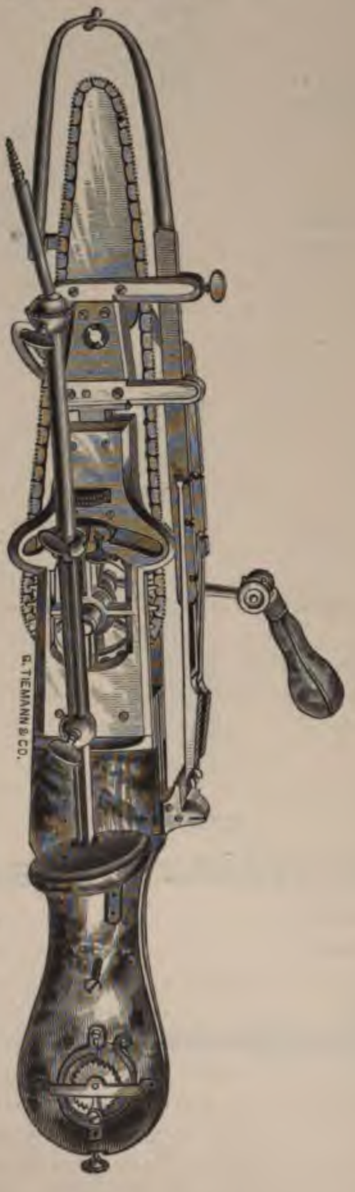


FIG. 78.—Heine's Saw.



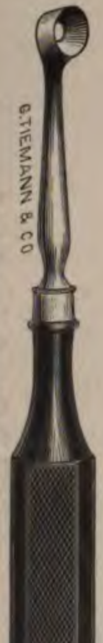


FIG. 78b.—Hebra's Bone Scoop.

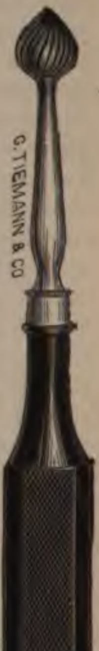


FIG. 78c.—Marshall's Osteotrite.

F. A. Stohlmann. **Edward Pfarre.**

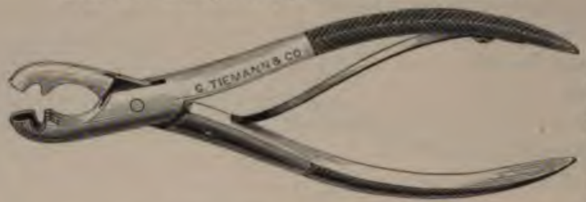
1	Capital Saw	$5.00
1	Pair Dressing Scissors	1.25
1	Small Hone	0.75
1	Long Amputating Knife, handle to unscrew	5.50
1	Pair Parker's Retractors	1.50
1	Galt's Trephine and Handle	4.00
1	Pair Liston's Bone Forceps	3.00
1	Pair Artery Forceps, spring-catch, fenestrated	2.00
2	Serrefines, steel, plated	1.00
2	Catheters, silver, Nos. 5, 9. @ $2	4.00
1	Bullet Probe, whalebone	0.50
1	Catling, long	3.50
1	Catling, small	2.00
1	Trepanning Scalpel	1.75
1	Finger Knife, sharp-pointed	1.00
1	Curved Bistourie, sharp-pointed	1.00
1	Curved Bistourie, probe-pointed	1.00
1	Hernia Knife	1.00
3	Scalpels, assorted, @ 75 cts	2.25
1	Tenotome	1.00
1	Tenaculum	0 75
1	Aneurism Needle	0.70
1	Tourniquet	2.00
12	Needles, Silk, Wax, Plastic Pins	1.00
1	Rosewood Case, lined with oil-dyed velvet	14.00
1	Patent leather Cover, water-proof	3.50
		$74 80

MOTT'S GENERAL OPERATING SET.

1	Mott's Knife, large	$5.00
1	Mott's Knife, medium	4.00
1	Small Catling	2.00
1	Capital Saw	5.00
1	Metacarpal Saw	1.50
1	Tourniquet	2.00
1	Tenaculum	1.25
1	Pair Artery Forceps, plain	0.75
1	Pair Artery Forceps, spring-catch, plain	1.50
1	Tiemann & Co.'s Bullet Forceps	2.25
1	Liston's Bone Forceps, best	3.00
12	Needles, Silk, Wax, Plastic Pins	1.00
1	Galt's Trephine and Handle	4.00
1	Trepanning Elevator and Raspatory	1.50
1	Tenotome	1.25
1	Curved Bistourie, sharp-pointed	1.25
1	Curved Bistourie, probe-pointed	1.25
1	Steel Director	0.60

OSTEOTOMY.

Fig. 79.—Darby's Rongeur and Bone Holder.



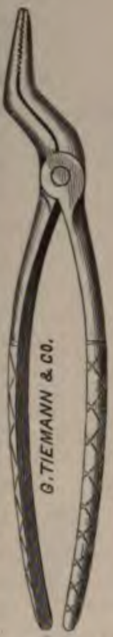


Fig. 81.—Van Buren's Trepanning and Sequestrum Forceps.

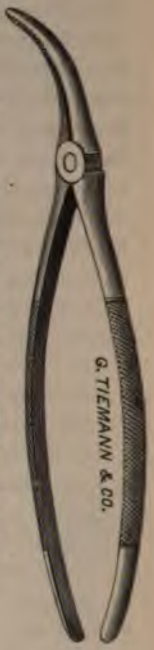


Fig. 82.—Markoe's Curved Sequestrum Forceps.

Fig. 80.—Rongeur or Bone-gnawing Forceps.

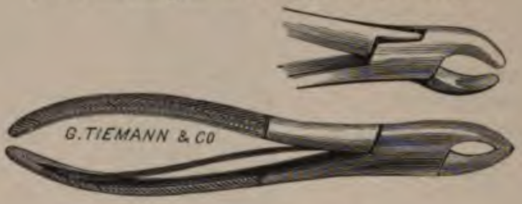


Fig. 83.—Lead Mallet.

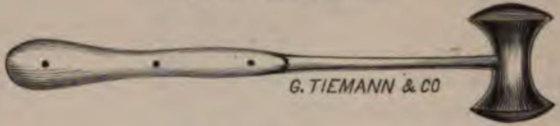


Fig. 84.—Gouge.

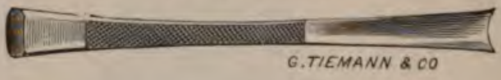


Fig. 85.—Curved Hand Gouge.

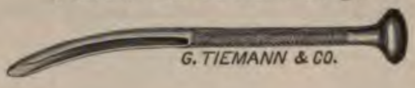


Fig. 86.—Chisel.

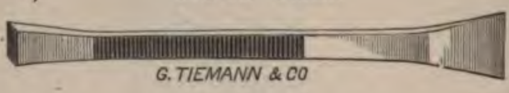
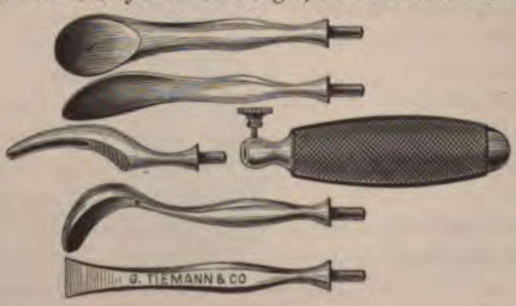


Fig. 86c.—Darby's Set of Gouges, Levators and Chisels.



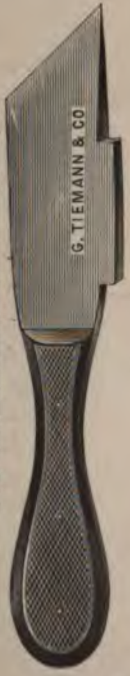


Fig. 86b.—Linhardt's Knife-Chisel.

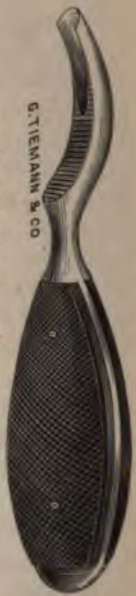


Fig 84b.—Szymanowsky's Gouge.

2 Silver Probes	$0.75
1 Pair Polypus Forceps	2.25
1 Pair Scissors, straight	1.25
1 Pair Scissors, angular curve	1.50
2 Mott's Retractors	1.50
1 Finger Knife	1.25
3 Scalpels, @ $1.25	3.75
1 Double Hook	1.75
1 Hey's Saw	1.75
1 Trocar and Canula	2.00
1 Rosewood Case, lined with oil-dyed velvet	10.00
Amount	$72.85

SEYMOUR'S GENERAL OPERATING SET.

1 Pair Tiemann & Co.'s Bullet Forceps	$2.25
1 Pair Polypus Forceps	2.25
1 Trepanning Elevator and Raspatory	1.50
1 Exploring Trocar	1.50
1 Pair Artery Forceps, plain	0.75
1 Steel Director	0 60
1 Metacarpal Saw	1.50
1 Bow Saw, 2 blades	8.00
1 Hey's Saw	1.75
1 Trepanning Brush	0.25
2 Blackman's Retractors	3.00
1 Double Trachea Tube, silver	6.00
3 Skains Silk, Iron Wire	0.50
6 Double Bougies, s. s, Nos. 1 to 12, nickel-plated	7.50
3 Silver Catheters, Nos. 3, 6, 9	6.00
3 Gum Elastic Catheters, best English, @ 50 cts.	1.50
1 Lithotomy Staff	2.00
1 Pair Harelip Scissors, straight, heavy	1.50
1 Pair Scissors, curved on the flat	1.50
1 Set Mott's Artery Needles	2.75
4 Serrefines, @ 25 cts.	1.00
2 Coils Silver Wire, Plastic Pins	1.00
1 Liston's Knife, long 1 Long Catling 1 Screw Handle, for both	10.00
1 Liston's Knife, medium	3.50
1 Catling, narrow	3.00
1 Finger Knife, long, narrow	2.00
1 Cartilage Knife, heavy, ebony handle	1.75
1 Tenaculum	1.25
1 Pair Artery Forceps	2.00
1 Pair Artery Forceps, self-closing, bull dog	1.50
1 Chain Saw, best	10.00

ARTERIAL.

FIG. 87.—Speir's Artery Constrictor.

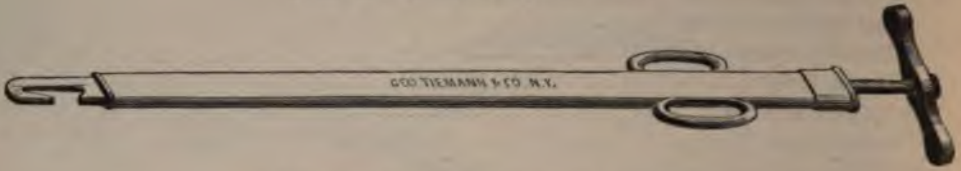


FIG. 88.—Prince's Tenaculum Forceps.

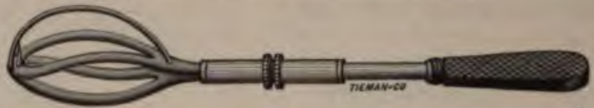


FIG. 89.—Stearn's Artery Claws and Forceps. 1, 2, 3.

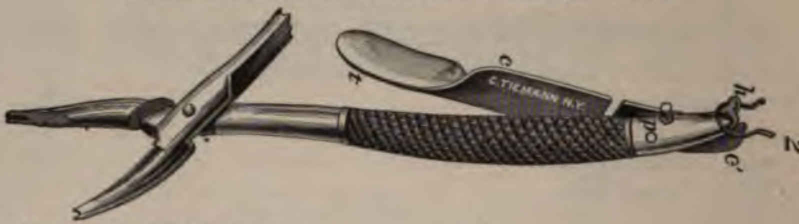
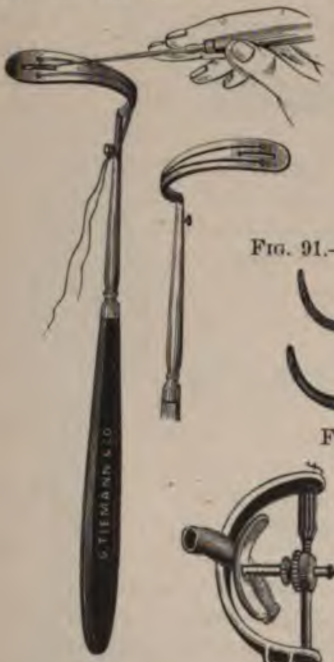
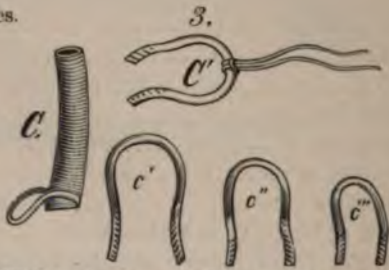


FIG. 90.—Crampton's Artery Needles.





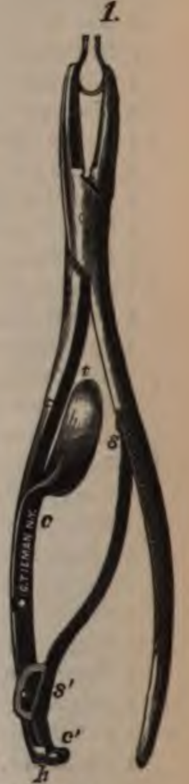


FIG. 91.—Wight's Artery and Ligature Forceps.

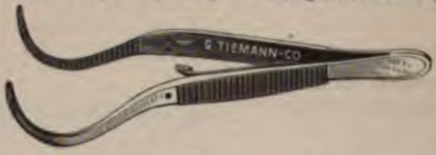
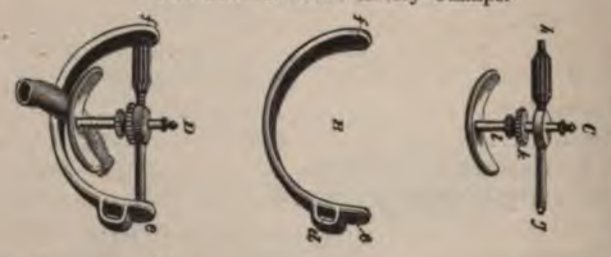
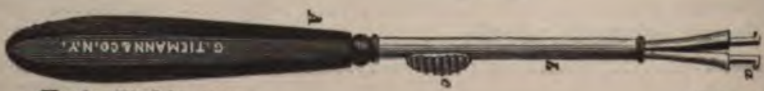


FIG. 91b.—Bilroth's Artery Clamps.





F. A. Stohlmann. **Edward Pfarre.**

2	Silver Probes	$0.75
1	Bullet Probe, lead	0.50
1	Bullet Probe, whalebone	0.50
1	Nelaton's Bullet Probe	0.60
3	Scalpels, assorted @ $1.25	3.75
1	Curved Bistourie, sharp-pointed	1.25
1	Curved Bistourie, probe-pointed	1.25
1	Hernia Knife	1.25
1	Spud and Gouge, for removing foreign bodies from the eye	2.50
1	Pair Gullet Forceps	2.50
1 1 1	Galt's Trephine Bone Trephine Trephine Handle	8.00
1	Trocar and Canula, straight	2.00
1	Rectum Trocar and Canula	3.00
1	Lead Mallet	2.50
1	Chisel	1 00
1	Gouge	1.50
1	Set Brainard's Bone Drills	3.50
2	Ear Specula, porcelain, @ 50 cts.	1.00
1	Pair Liston's Bone Forceps, with spring, extra large	5.00
1	Pair Sequestrum Forceps, with spring	2 50
1	Rongeur, with spring	3.50
1	Pair Satterlee's Bone Forceps, small	2.50
1	Tourniquet	2.00
1	Horn Jaw Screw	1.25
1	Rosewood Case, lined with oil-dyed velvet	28.00
1	Patent leather Cover, water-proof	5.00
	Amount	$176.70

U. S. A. CAPITAL OPERATING SET.

1	Amputating Knife, long	$4.50
1	Amputating Knife, medium	3.50
1	Catling, long	4.50
1	Catling, small	2.00
1	Cartilage Knife, heavy, ebony handle	1.75
1	Bow Saw, two blades	8.00
1	Metacarpal Saw	1.50
1	Chain Saw, best	10.00
1	Hey's Saw	1.75
1 1 1	Galt's Trephine Crown Trephine Trephine Handle	8.00
1	Pair Liston's Bone Forceps, with spring	4.50
1	Pair Liston's Bone Forceps, slightly curved	4.50
1	Pair Gouge Forceps or Rongeur	3.50
1	Pair Sequestrum Forceps	2.50

ARTERIAL.

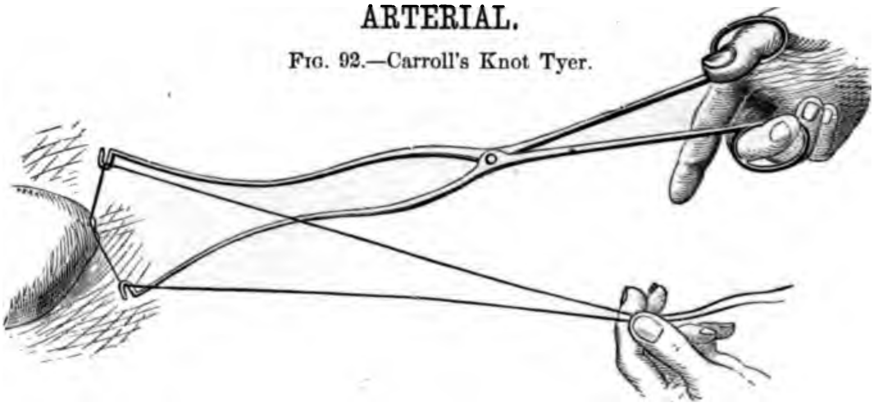


FIG. 92.—Carroll's Knot Tyer.

FIG. 93.—Mott's Set of Aneurism Needles

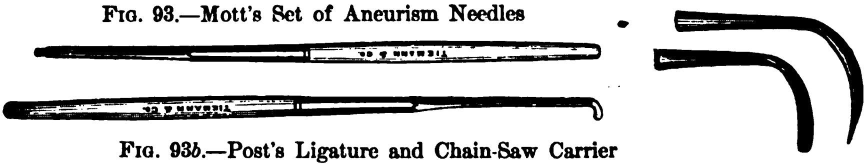


FIG. 93*b*.—Post's Ligature and Chain-Saw Carrier

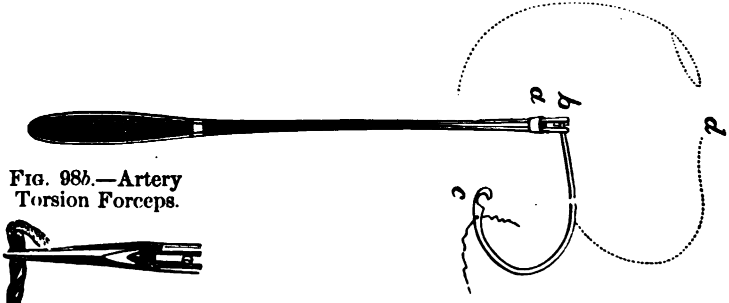


FIG. 96.
Ligature and Ruptured Perineum Needle.

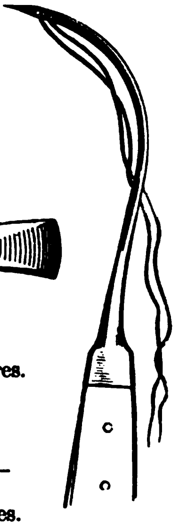


FIG. 98*b*.—Artery Torsion Forceps.

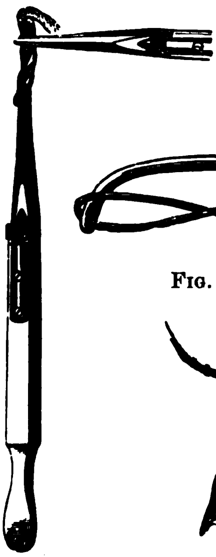


FIG. 94.—Plain Aneurism Needle.

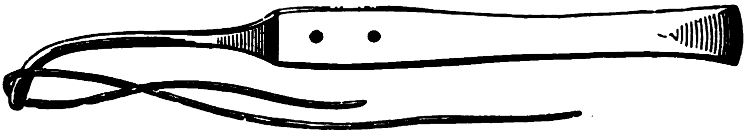


FIG. 97.—Tiemann & Co.'s Hollow Needle for Wire Sutures.

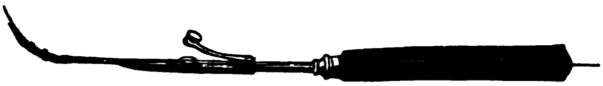


FIG. 95.—Helical Needle for Sutures and Ligatures.

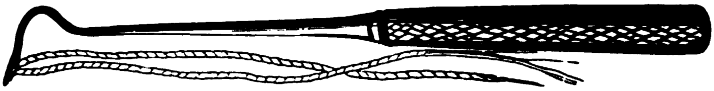
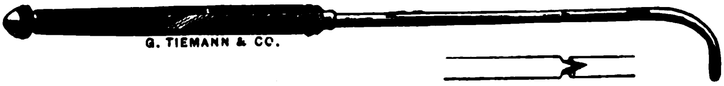


FIG. 98.—Student's Aneurism Needle


G. TIEMANN & CO.

1 Pair Artery Forceps, plain	$0.75
1 Set Mott's Aneurism Needles	2.75
12 Surgeon's Needles	1.00
1 Tourniquet	2.00
1 Tenaculum	0 75
1 Pair Scissors, straight, heavy	1.50
1 Chisel and 1 Gouge	2.50
1 Lead Mallet	2.50
1 Set Brainard's Bone Drills	3.50
1 Pair Mott's Retractors	1.50
1 Elevator and Raspatory	1.50
1 Brush, 12 yards Iron Wire, Silk, Plastic Pins	0.75
1 Mahogany Case, lined with oil-dyed velvet or chamois	16.50
1 Leather Pouch	4.50
	$102.50

U. S. A. STAFF SURGEONS' CAPITAL OPERATING SET.

1 Amputating Knife, long	$4.50
1 Amputating Knife, medium	3.50
1 Catling, long	4.50
1 Catling, small	2.50
1 Cartilage Knife, heavy, ebony handle	1.75
1 Straight Bistourie	1.50
3 Scalpels, @ $1.50	4.50
1 Bow Saw, two blades	8.00
1 Chain Saw, best	10.00
1 Metacarpal Saw, lifting back	3.50
1 Hey's Saw	1.75
2 Trephines and Handle	8.00
1 Razor	1.50
1 Raspatory, ebony handle	1.50
1 Elevator, strong	1.50
1 Brush	0.50
1 Pair Liston's Bone Forceps, 9 inches long	5.00
1 Rongeur, curved, with spring	3.50
1 Rongeur, straight, with spring	3.50
1 Pair Sequestrum Forceps	3.00
1 Pair Lithotomy Forceps	2.50
1 Pair Liston's Artery Forceps, slide-catch	3.00
1 Set Mott's Artery Needles	2.75
12 Surgeons' and six Wire Needles	1.35
1 Tourniquet	2.00
1 Tenaculum	1.25
1 Pair Scissors	1.25
1 Chisel and one Gouge, ebony handles, @ $2	4.00
1 Trocar and Canula, straight	2.00
1 Set Brainard's Bone Drills	3.50

ARTERIAL.

Fig. 99.—Nott's Artery Clamp Forceps.

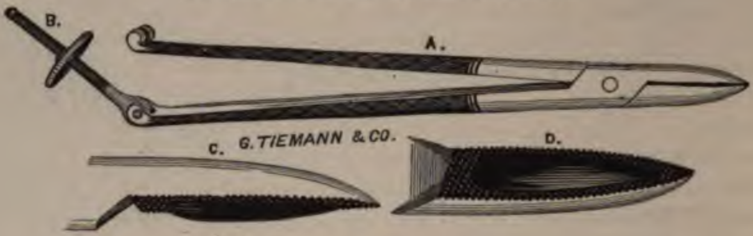


Fig. 100.—Hewson's Torsion Forceps.

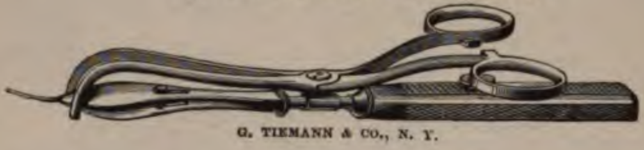


Fig. 101.—Hamilton's spring-catch Artery Forceps, fenestrated.

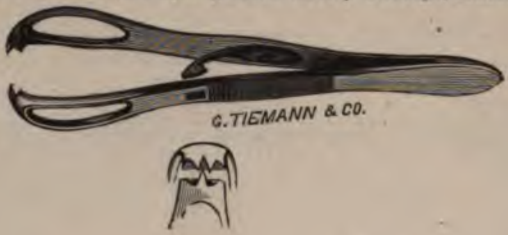


Fig. 102.
Milne's Artery
Compression Forceps

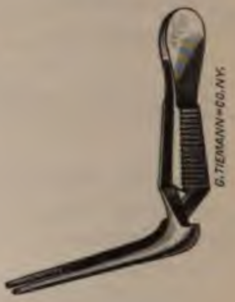


Fig. 102*b*.—Phelps' Artery and Torsion Forceps.

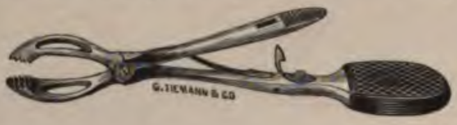


Fig. 103.—Spring-catch fenestrated Artery Forceps.

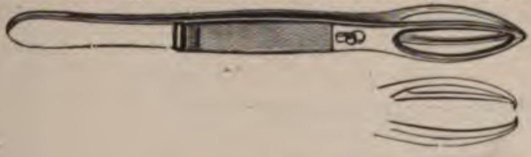
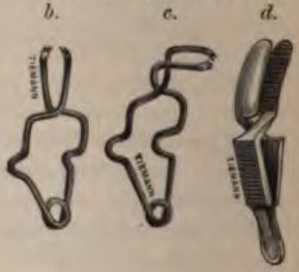
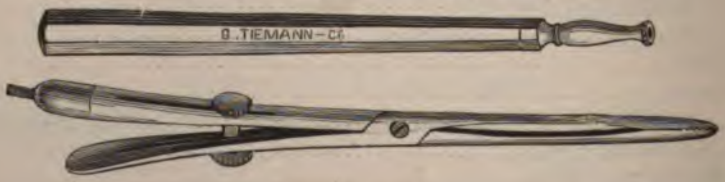


Fig. 103*b*.—Serrefin, straight.
c.—Serrefin, angular.
d.—Langenbeck's Serrefin



(Part III. Fig. 156.)—Gross Artery Compressor.



See also page 44.

1	Pair Mott's Retractors	$1.50
12	Yards Silver Wire, @ 50 cts.	6.00
1	Mahogany Case, lined with red chamois	25.00
1	Leather Pouch, heavy	7.00
	Amount	$137.10

BONE EXSECTING SET.

1	Chain Saw, best	$10.00
2	Chisels, different sizes, @ $1	2.00
2	Gouges, different sizes, @ $1 50	3.00
1	Curved Rongeur or Gouge Forceps, with spring	3.50
1	Pair Listons' Bone Forceps, large	4.50
1	Set Brainards' Bone Drills	3.50
1	Bone Trephine and Handle	4.00
1	Elevator and Raspatory	1.50
1	Pair Sequestrum Forceps	2.50
1	Pair Mott's Retractors	1.50
3	Coils Silver Wire	1.50
6	Wire Needles, Silk, Iron Wire	0.60
1	Pair Bone Forceps, angular	5.00
1	Pair Ferguson's Lion-Jaw Bone-holding Forceps	3.00
1	Lead Mallet	2.50
1	Metacarpal and Interosseous Saw, narrow	1.50
1	Pope's Antrum Drill	3.50
1	Mahogany Case, lined with oil-dyed velvet	12.00
	Amount	$65.60

PARKER'S COMPACT OPERATING SET.

1	Long Amputating Knife 1 Medium Amputating Knife 1 Small Amputating Knife 1 Screw-Handle, to fit the above	$10.50
1	Finger Knife	2.00
1	Curved probe-pointed Bistourie	1.25
2	Scalpels, @ $1.25	2.50
1	Aneurism Needle	1.25
1	Tenaculum	1.25
1	Galt's Trephine and Handle	4.00
1	Field Tourniquet	1.00
1	Metacarpal Saw	1.50
1	Tiemann & Co.'s Bullet Forceps	2.25
1	Trepanning Elevator and Raspatory	1.50
1	Pair Dressing Forceps	1.50
1	Pair straight Scissors	1.25

ARTERIAL.

FIG. 104.—Petit's Spiral Tourniquet.

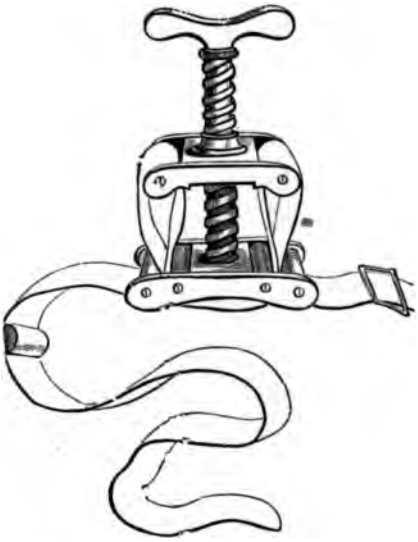


FIG. 104b.—Charriére's Tourniquet.

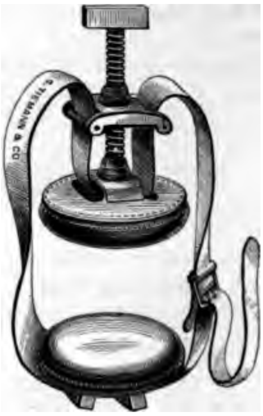


FIG 105.
Prussian. U. S. A.
Field Tourniquets.

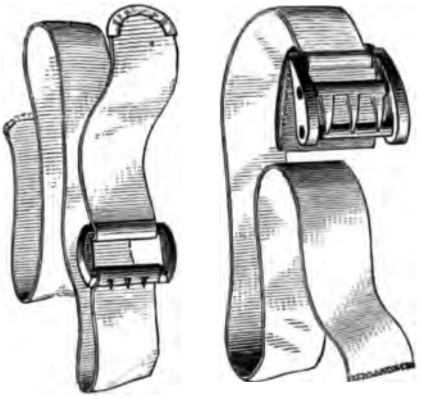


FIG. 106b.—Gross' Tourniquet.

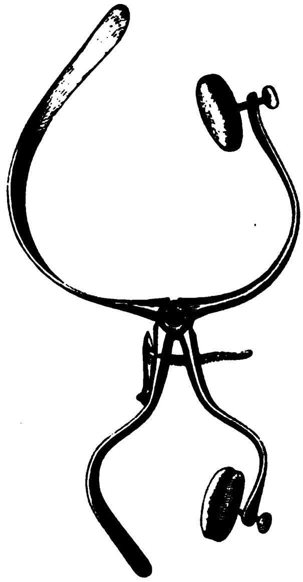


FIG. 106.
Valentine Mott's Tourniquet.

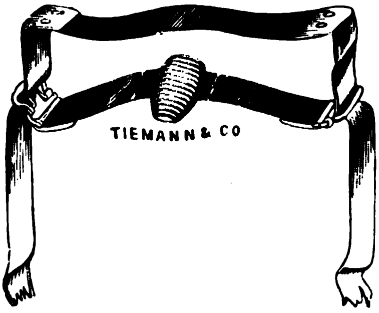
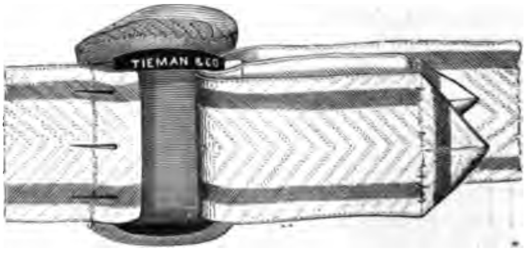


FIG. 107.—Field Tourniquet.



F. A. Stohlmann. **Edward Pfarre.**

1	Pair spring-catch Artery Forceps	$1.50
1	Hey's Saw	1.75
1	Pair Liston's Bone Forceps	3.00
1	Capital Saw	5.00
1	Steel Director	0 60
3	Silver Probes	0.75
12	Needles, Silk, Wax and Plastic Pins	1.00
1	Whalebone Bullet Probe	0.50
1	Rosewood Case, lined with oil-dyed velvet	16 00
	Amount	$61.85

No. 1. MINOR OPERATING SET.

1	Straight Finger Knife	$1.00
1	Curved probe-pointed Bistourie	1.00
1	Curved sharp-pointed Bistourie	1.00
1	Cooper's Hernia Knife	1.00
3	Scalpels, assorted, @ 75 cts.	2.25
1	Tenotome	1.00
1	Aneurism Needle	0.70
1	Tenaculum	0.75
6	Needles, Silk, Iron Wire and Plastic Pins	0.75
1	Pair straight Scissors	1.25
1	Pair Dressing Forceps	1.50
1	Pair plain Artery Forceps	0.75
1	Steel Director	0.60
1	Rosewood Case, lined with oil-dyed velvet	4.50
	Amount	$18.05

No. 2. MINOR OPERATING SET.

1	Straight Finger Knife	$1.00
1	Curved probe-pointed Bistourie	1 00
1	Curved sharp-pointed Bistourie	1.00
1	Cooper's Hernia Knife	1.00
3	Scalpels, assorted, @ 75 cts.	2.25
1	Tenotome	1.00
1	Aneurism Needle	0.70
1	Tenaculum	0.75
6	Needles, Silk, Iron Wire and Plastic Pins	0.75
1	Pair straight Scissors	1.25
1	Pair Dressing Forceps	1.50
1	Pair plain Artery Forceps	0.75
1	Steel Director	0.60

ARTERIAL.

FIG. 108.—Erichson's Arterial Compressor.

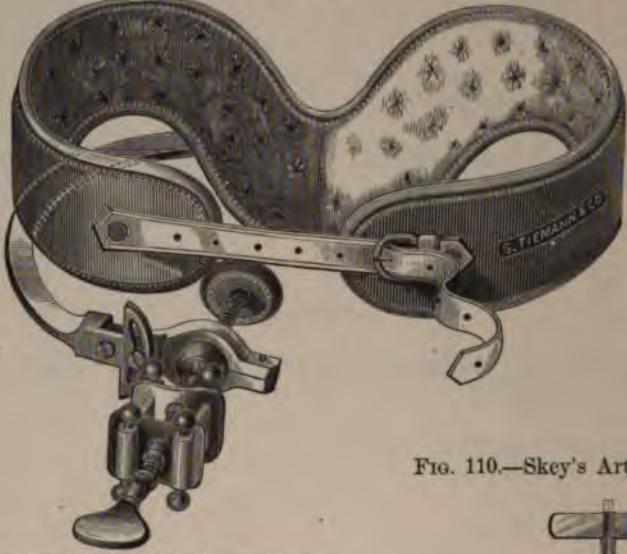
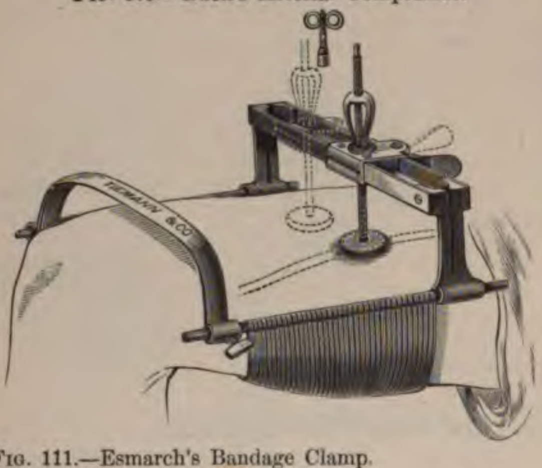

G. TIEMANN & CO.

FIG. 110.—Skey's Arterial Compressor

FIG. 109.—Buck's Arterial Compressor.



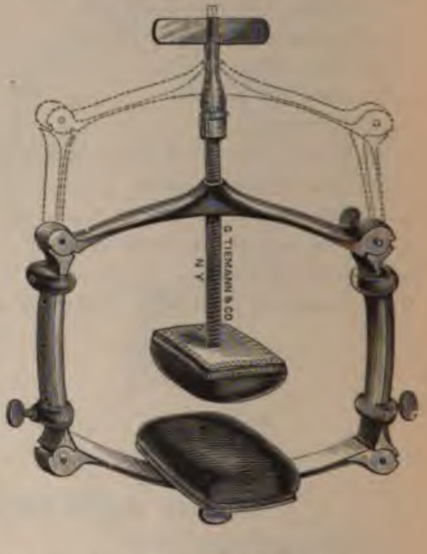


FIG. 111.—Esmarch's Bandage Clamp.

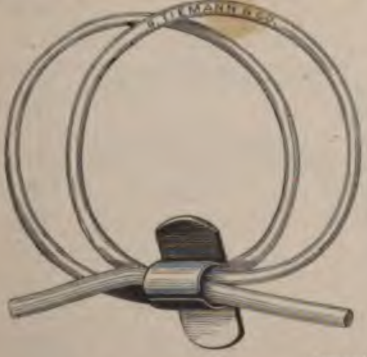
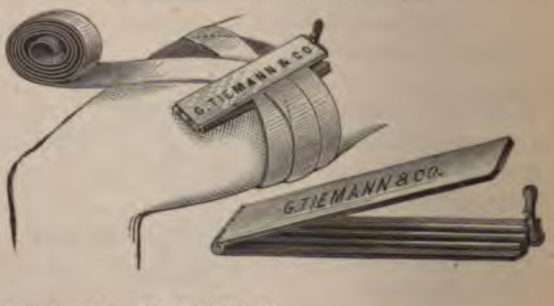

G. TIEMANN & CO.

FIG. 111*b*.—Langenbeck's Bandage Clamps.
For Esmarch's Bloodless Method.


G. TIEMANN & CO.
G. TIEMANN & CO.

Esmarch's Tourniquet, see Fig. 184, Part IV.

1 Compound Catheter, male and female, plated	$2.00
1 Pair Spring-catch Artery Forceps, fenestrated	2.00
2 Silver Probes	0.75
1 Hard-rubber Caustic Holder	1.00
1 Rosewood Case, lined with oil-dyed velvet	5.75
Amount	$25.05

No. 3. ENOS' MINOR OPERATING SET.

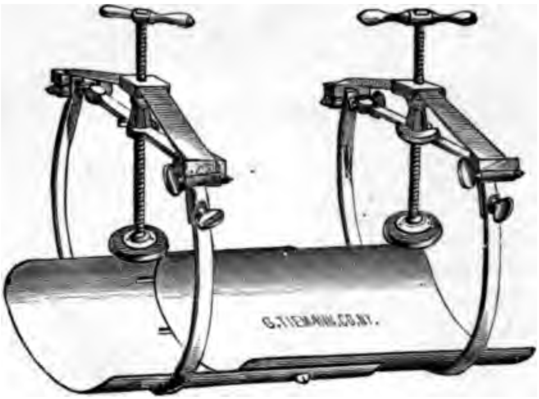
1 Double Hook	$1.75
1 Curved sharp-pointed Bistourie	1 25
1 Curved probe-pointed Bistourie	1.25
1 Cooper's Hernia Knife	1.25
4 Scalpels, assorted, @ $1.25	5.00
1 Pair small Polypus Forceps	1.50
1 Tenotome	1.25
1 Tenaculum	1.25
1 Aneurism Needle	1.25
1 Narrow Metacarpal Saw	1.50
1 Pair plain Artery Forceps	0.75
1 Small Trocar	2.00
1 Pair angular-curved Scissors	1.50
1 Pair slide-catch Artery Forceps	2.50
6 Needles, Silk, Iron and Silver Wire	1.25
1 Steel Director	0.60
2 Silver Probes	0.75
1 Rosewood Case, lined with oil-dyed velvet	6.50
Amount	$33.10

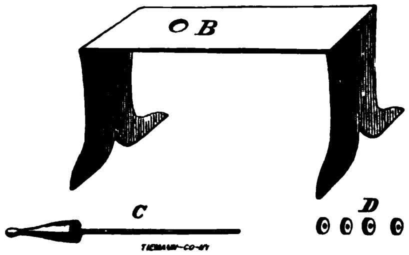
No. 4. EVES' MINOR OPERATING SET.

1 Double Hook	$2.00
1 Curved sharp-pointed Bistourie	1.25
1 Curved probe-pointed Bistourie	1.25
1 Cooper's Hernia Knife	1.25
4 Scalpels, assorted, @ $1.25	5.00
1 Tenotome	1.25
1 Tenaculum	1.25
1 Aneurism Needle	1.25
1 Narrow Metacarpal Saw	1.50
1 Pair plain Artery Forceps	0.75
1 Small Trocar	2.00
1 Pair angular Scissors	1.50
1 Pair Polypus Forceps	2.00

ARTERIAL.

Fig. 112. Briddon's Artery Compressor.





The action of this instrument, made *elastic*, by running the screws through tense india rubber bands, can be tolerated for a long time, without producing any annoying complications.

Pressure can be made, either at *two* points, the distance between which may be varied according to circumstances, or the instrument may be taken apart and a *single* compressor used as a tourniquet. A *smaller* instrument can be made for the upper extremity, a *larger* one adapted for compression of the abdominal aorta.

The hard rubber compressors are attached to the Screws by ball and socket-joints and fitted into concavo-convex caps of hard wood protected by several layers of buckskin. These additional pads are put on just before screwing down, and should be well powdered each time they are applied.

For compression at the groin, a truncated cone of lead, (see Fig. C) is required. This weighs 7 pounds, and tapers, so as to leave a neck two inches long, which terminates in a bulb, an inch and a quarter in diameter, covered with buck-skin. Into the base of this cone an iron stem of ten inches length, and a quarter of an inch thickness is secured. To control the circulation it requires also four or five perforated discs (see Fig. D), of one pound each, to string over the stem C, which is maintained in position by a cradle, (see Fig B).

F. A. Stohlmann. **Edward Pfarre.**

1	Pair slide-catch Tortion Forceps	$2.50
6	Needles, Silk and Silver Wire	1.25
1	Steel Director	0.60
2	Silver Probes	0.75
1	Rosewood Case, lined with oil-dyed velvet	6.50
	Amount	$33.85

COMPACT MINOR OPERATING SET.

With Tiemann & Co's Patent Catch Instruments.

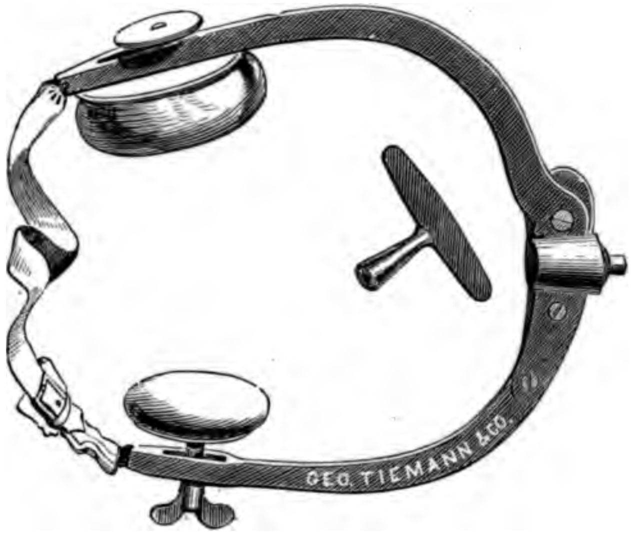
1	Metacarpal Saw	$1.20
1	Straight Bistourie	1.20
1	Curved probe-pointed Bistourie	1.20
1	Curved sharp-pointed Bistourie	1.20
2	Scalpels, @ $1.20	2.40
1	Tenotome	1.20
1	Tenaculum	1.20
1	Post's Exploring and Director Needle	1.20
2	Handles, @ $1.60	3.20
1	Compound male and female Catheter and Caustic Holder, made seamless, of sterling silver	5.00
1	Pair slide-catch Artery Forceps	2.50
1	Pair straight Scissors	1.25
1	Steel Director	0.60
2	Silver Probes	0.75
6	Needles, Silk, Wax and Plastic Pins	0.75
1	Morocco covered Case, lined with oil-dyed velvet	2.75
	Amount	$27.60

HOSPITAL MINOR OPERATING SET.

2	Finger Knives, @ $1	$2.00
2	Straight probe-pointed Bistouries, @ $1	2.00
1	Straight Hernia Knife	1.00
2	Curved sharp-pointed Bistouries, @ $1	2.00
2	Curved probe-pointed Bistouries, @ $1	2.00
1	Curved Hernia Knife	1.00
1	Abscess Knife	1.00
1	Short straight Bistourie	1.00
4	Tenotomes, various shapes, @ $1	4.00
1	Tenaculum	1.00
1	Pair Nichol's Needle Forceps	1.75
1	Pair Parker's Retractors	1.50

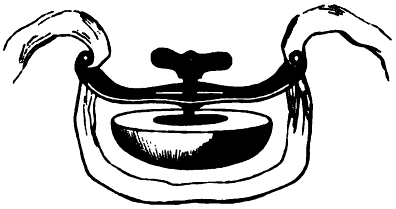
ARTERIAL.

FIG. 113.—May's Tourniquet, for the Treatment of Aneurism.



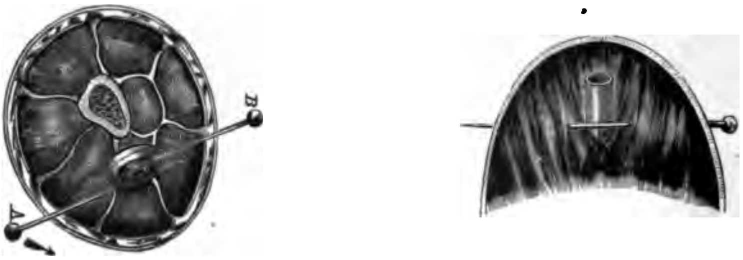
A.	Pad of pressure.
B.	Pad of counter-pressure.
C.	Ball and socket-joint in the pad of pressure, which is governed by the screw and nut, *D.*
E.	Detached key, by which (when fitted on *F*) the pads can be separated or approached.
G.	Fenestræ, by which the pads can be adjusted.
H.	Strap and buckle.

FIG. 114.—Tiemann & Co.'s Direct Pressure Tourniquet.



Will not easily turn over, nor hem the circulation of the venous blood.

FIG. 114*b*.—Acupressure Pins, for arresting Surgical Hemorrhage, &c.



See Needles and Wire, see page 68.

18	Assorted Needles, Silk, Silver Wire and Plastic Pins	$2.50
12	Yards annealed Iron Wire	0.10
3	Serrefines, @ 25 cts	0.75
1	Straight and 1 curved Tonsil Knife, @ $1.50	3.00
7	Scalpels, assorted sizes and shapes, @ $1	7.00
1	Green's Double Hook, plain	1.50
1	Pair spring-catch fenestrated Artery Forceps	2.00
1	Pair Coxeter's plain Artery Forceps, small	1.00
1	Pair Strabismus Forceps	1.25
1	Pair Tiemann & Co.'s Bullet Forceps	2.25
1	Whalebone Bullet Probe	0.50
1	Nelaton's Bullet Probe	0.60
1	Pair Polypus Forceps	2.25
1	Pair Vulcellum Forceps	2.25
1	Pair straight heavy Scissors	1.50
1	Pair Scissors, curved on the flat	1.50
1	Pair Scissors, angular curve	1.50
1	Trocar and Canula	3.00
1	German silver Ear Speculum	2.50
1	Belocq's Sound, for epistaxis, sterling silver	3.00
1	Steel Director	0.60
1	Rosewood Case, brass-bound and lined with oil-dyed velvet	15.00
		Amount $74 80

U. S. A. STAFF SURGEON'S MINOR OPERATING SET.

Regulation Style of October, 1867.

1	Amputating Knife	$2.50
1	Long Finger Knife	2.00
1	Hernia Knife	1.75
1	Straight sharp-pointed Bistourie	1.75
1	Curved sharp-pointed Bistourie	1.75
1	Curved probe-pointed Bistourie	1.75
2	Scalpels, large and small, @ $1.75	3.50
1	Pair slide-catch Artery Forceps	3.00
1	Pair Tiemann & Co.'s Bullet Forceps	2.25
1	Pair Dressing Forceps	1.50
1	Pair Coxeter's Dissecting Forceps, small	1.00
1	Pair Œsophageal Forceps, French-joint	2.50
1	Set Mott's Aneurism Needles	2.75
12	Surgeon's and 6 Wire Suture Needles	1.50
1	Pair straight Scissors, French-joint	1.50
1	Pair angular Scissors, French-joint	1.50
1	Pair Scissors, curved on the flat, French-joint	1.50
1	Tenaculum	1.50
1	Rectum Trocar and Canula	3.00
2	Double Trachea Tubes, sterling silver, @ $6	12.00

BULLET.

Fig. 115. U. S. A. Bullet Forceps.

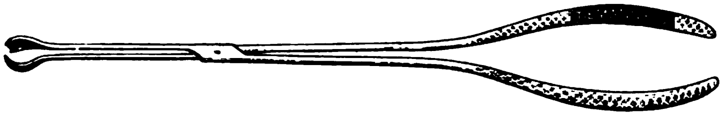


Fig. 116. Tiemann & Co.'s Bullet Scoop.

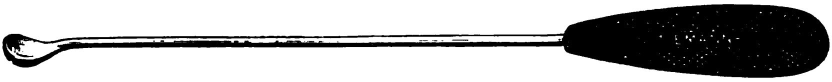


Fig. 117. Bullet Seeker, burr head.

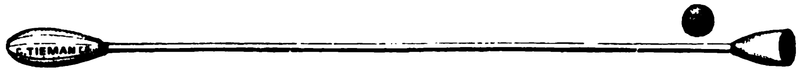


Fig. 118. Mose's Bullet Extractor.

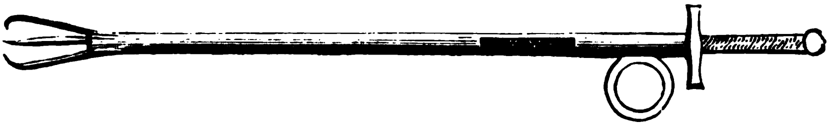


Fig. 119. Tiemann & Co.'s Bullet Screw.

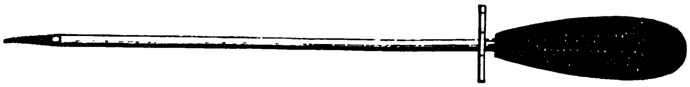


Fig. 120. Nelaton's Bullet Probe, porcelain head.

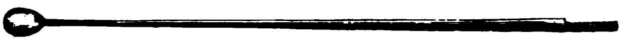


Fig. 121. Tiemann & Co.'s Bullet Seeker, flexible.

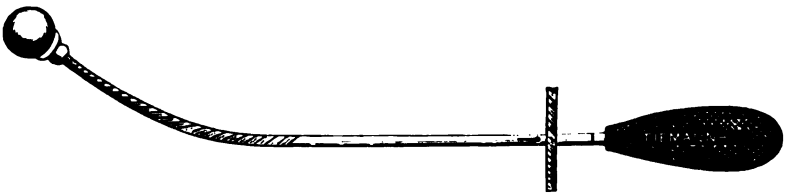
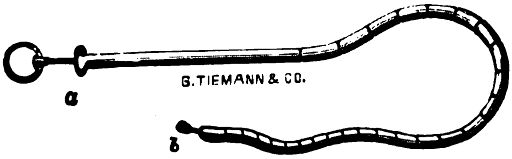


Fig. 122. Dr. L. A. Sayre's Vertebrated Bullet Probe.



1	Belocq's Canula for Epistaxis, sterling silver	$3.00
1	Nelaton's Bullet Probe	0.60
1	Director and Porte Méche	0.60
1	Pair flat and cutting Pliers	2.50
1	Wire Ecraseur with two points	6.50
2	Grooved Staffs, @ $2	4.00
1	Syme's Staffs	2.00
1	Plain Sound	1.25
6	Silver-plated, double-curved Bougies,	9.00
3	Silver Catheters	4.50
3	Gum Elastic Catheters, English, @ 40 cts	2.40
1	Prostate Gland Catheter, sterling silver	4.00
24	Suture Pins	0.50
6	Serrefines @ 25 cts	1.50
6	Yards Silver Sutures	3.00
1	Œsophageal Probang, silver Crochet	3.00
1	Tonsilotome	14.00
1	Pair Trousseaux Tracheal Forceps	2.00
1	Mahogany Case, brass-bound	25.00
1	Leather Pouch	7.00
	Amount	$136.35

No. 1. TWO-FOLD POCKET SET.

Two-fold Morocco Case, single-bladed Instruments with Tortoise-shell Handles, containing: One Scalpel, one probe-pointed Bistourie, one Tenaculum, one pair of straight Scissors, one pair of Artery Forceps, one Spatula, one Compound (male and female) Catheter, one Director, one pair of silver Probes, six Needles and Silk $10.00

No. 2. TWO-FOLD POCKET SET.

Two-fold Morocco Case, single-bladed Instruments with Tortoise-shell Handles, containing: One Scalpel, one probe-pointed Bistourie, one Tenaculum, one pair of straight Scissors, one pair of Artery Forceps, one pair of Dressing Forceps, one hard rubber and silver Caustic Case, one Compound Male and Female Catheter, one Director, one pair of silver Probes, six Needles and Silk $12.00

No. 3. THREE-FOLD POCKET SET.

Three-fold Morocco Case, single-bladed Instruments with Tortoise-shell Handles. Contents: One Scalpel, one probe-pointed Bistourie, one Tenaculum, one pair of straight Scissors, one pair of Artery Forceps, one pair of Dressing Forceps, one hard rubber and silver Caustic Case, one Spatula, one sharp-pointed Bistourie, one Gum Lancet, one Compound Male and Female Catheter, one Director, one pair of silver Probes, six Needles and Silk........ $15.00

No. 4. FOUR-FOLD POCKET CASE

Leather Case. **Contents:** One Male and Female Catheter, one Tenaculum, one hard-rubber Caustic Case, two silver Probes, one Exploring Needle, one Director and Aneurism Needle.

BULLET.

FIG. 123.—Geo. Tiemann & Co.'s American Bullet Forceps.

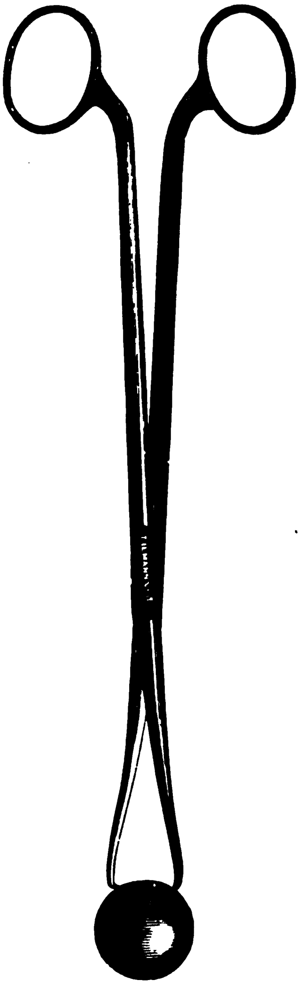


FIG. 123*b*.—Gross' Bullet Forceps.

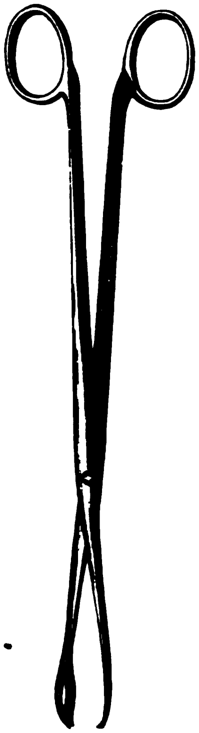


FIG. 124.—Hamilton's Bullet and Sequestrum Forceps.

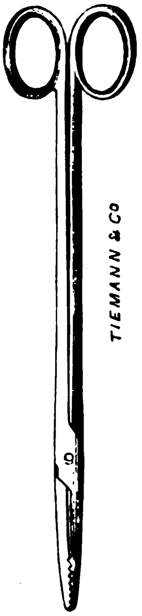


FIG. 125.—Long silver Bullet Probes.

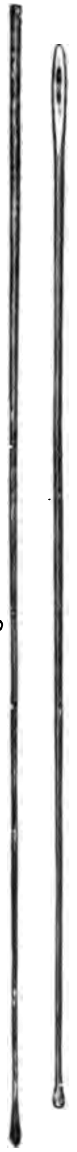
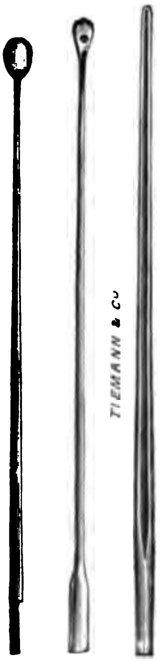


FIG. 126.—Hamilton's Director Probes. Nelaton Point.



Our Bullet Forceps has also been introduced into the European Armies during the late Franco-German War; it is highly recommended by the Army Surgeons, and styled by them "the *American* Bullet Forceps." It is also of material service in the removal of portions of necrosed bone.

FIG. 127.—Tiemann & Co.'s Bullet Probe, with Eye for introducing lint into wounds.

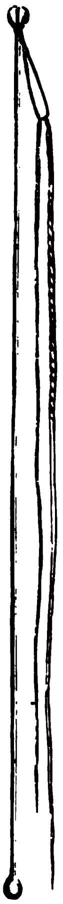
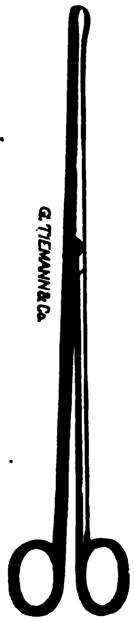


FIG. 128.—Thomasin's Bullet Forceps.



F. A. Stohlmann. **Edward Pfarre.**

one probe-pointed Bistourie, one pair Dressing Polypus Forceps, one Scalpel, one sharp-pointed Bistourie, one pair of straight Scissors, one pair of curved Scissors, one Thumb Lancet, one Spatula, one pair of Dissecting Forceps, one straight Finger Bistourie, one Seton Needle, six Needles and Ligature Silk. The Instruments have Tortoise-shell Handles and are single-bladed $21 00

No. 5. HOSPITAL POCKET SET.

Threefold Russia-leather or Morocco Case, single-bladed Instruments with Tortoise-shell Handles, containing: One sharp-pointed Bistourie, one probe-pointed Bistourie, one Scalpel, one Tenaculum, one Abscess Lancet, one Compound Catheter, one pair of straight Scissors, one pair of angular Scissors, one pair of Dressing Polypus Forceps, one pair of plain Artery Forceps, one Spatula, one steel Director, two silver Probes, six Needles and Ligature-Silk $18.00

No. 6. PARKER'S POCKET SET.

Twofold Morocco Case, plain double-bladed Instruments with Tortoise-shell Handles, containing: One Scalpel and probe-pointed Bistourie, one Tenotome and sharp-pointed Bistourie, one Tenaculum and Gum Lancet, one pair of Dressing Forceps, one pair of Artery Forceps, one pair of Scissors, one Lancet, two silver Probes, one steel Spatula, one steel Director, one plated Compound Catheter and Caustic-Holder, six Needles and Silk $18.00

No. 7. PARKER'S FINE POCKET SET.

Contents the same as in No. 6. Tortoise-shell Handle Instruments, either slide or spring-catch, extra fine finished, the Compound Catheter (male and female) is made of sterling silver, the Caustic-Holder *seamless*, will last much longer than a soldered one. The Case is made of genuine Turkey morocco, with a silver lock, very neat and compact $25.00

No. 8. MULTUM IN PARVO POCKET SET.

Turkey morocco Case, silk-velvet lining, silver lock. Instruments Tortoise-shell Handles with spring or slide-catch, double-bladed, containing: One Scalpel and probe-pointed Bistourie, one sharp-pointed Bistourie and Tenotome, one Gum Lancet and Tenaculum, one pair of straight Scissors, one pair of fenestrated spring-catch Artery Forceps, one Female Catheter and Caustic-Case made of sterling silver, one steel Director, two silver Probes, six Needles and Silk $19.00

No. 9. GUNN'S POCKET SET.

Turkey morocco Case, silk-velvet lining, silver lock. Instruments double-bladed, Tortoise shell Handles with slide or spring-catch. Contents: One Scalpel and Exploring Needle, one sharp-pointed Bistourie and Tenotome, one probe-pointed Bistourie and one Scalpel, one Seton Needle, one Tenaculum, one pair of Scissors, one screw Probe Director, one pair of Torsion Forceps with slide-catch and a long groove, answers also for holding Suture Needles, four Suture Needles, one sharp and two blunt Aneurism Needles, one skein Ligature-Silk. $20.00

MINOR OPERATING.

FIG. 129. Plain Artery Forceps.

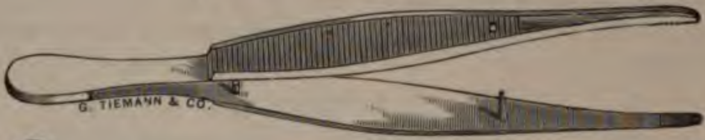


FIG. 129*b*. WOOD'S Artery Forceps.

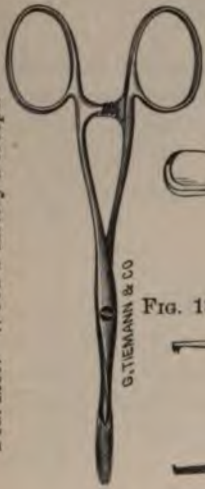


FIG. 135*c*. HUNTER'S Artery and Needle Forceps.

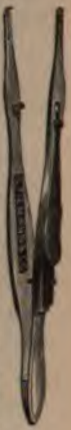


FIG. 130. COXETER'S Artery Forceps.

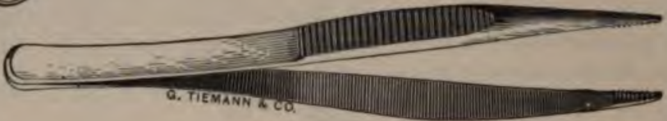


FIG. 131. Spring-catch Artery Forceps. Bull Dog or Plain Teeth.

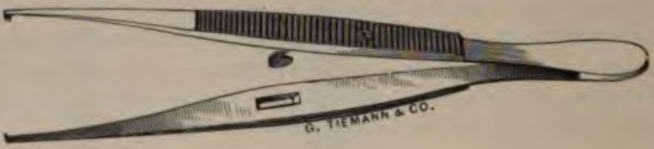


FIG. 132. Slide-catch Artery or Tortion Forceps.

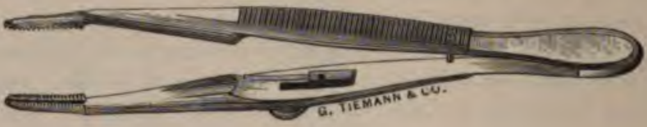


FIG. 130*b*. ANDREW'S Artery Forceps.

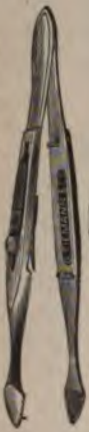


FIG. 133. Spatula and Elevator.

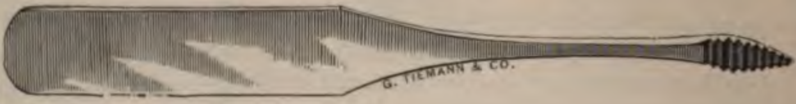


FIG. 135*b*. HUNTER'S Director.

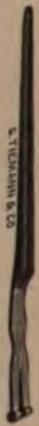


FIG. 134. Hernia Director.

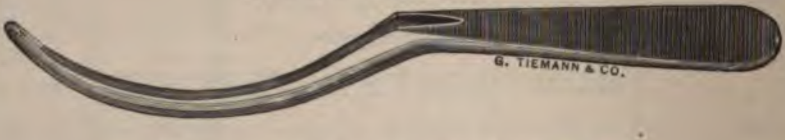
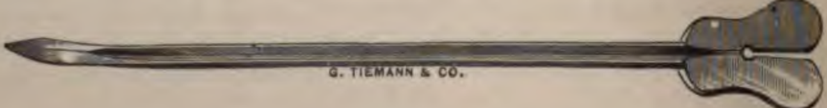


FIG. 135. Exploring Director Lancet Point.



No. 10. VAN BUREN'S POCKET SET.

Turkey morocco Case, silk-velvet lining, silver lock. Instruments double-bladed, Tortoise-shell Handles with slide or spring-catch. Contents: One sharp-pointed Bistourie and Tenotome, one Scalpel and one probe-pointed Bistourie, one Gum Lancet and Tenaculum, one pair of straight Scissors, one pair of Bulldog Artery Forceps, one steel Director, two silver Probes, one silver Male and Female Catheter of sterling silver and Caustic Case sterling silver *seamless*, six Needles and Ligature-Silk.. $22.00

No. 11. GROSS' POCKET SET.

Russia-leather or morocco Case, German silver lock. Instruments double and single-bladed, Tortoise-shell Handles with slide or spring-catch. Contents: One pair mouse-teeth Artery Forceps, delicate, one Scalpel, one pair of Dressing Polypus Forceps, one probe-pointed Bistourie and Tenaculum, one sharp-pointed Bistourie and Tenotome, one pair of straight Scissors, one Finger Bistourie, one Caustic-holder, plated, one pair Vulcellum Forceps, one Exploring Needle, one Gross' Ear Spoon, one steel Director, six Needles and Ligature-Silk, two silver Probes, one Male and Female Catheter.. $22.00

No. 12. GROSS' FINE POCKET SET.

Two-fold Turkey morocco Case, lined with silk velvet, silver lock. Contents the same as in No. 11. The Caustic Case is made of sterling silver, *seamless*, lasting much longer than a soldered one. The Male and Female Catheter are of sterling silver and the whole of extra fine finish and quality $26.00

No. 13. U. S. A. POCKET SET.

Russia leather Case with German silver lock. Instruments all single-bladed, Tortoise-shell Handles with spring or slide-catch and plain. Contents: One Scalpel, one straight Finger Knife, one curved probe-pointed Bistourie, one curved sharp-pointed Bistourie, one Tenotome, one Gum Lancet, two Thumb Lancets, one small Razor, one pair Artery Forceps, one Aneurism Needle, one Exploring Needle, one Tenaculum, one pair of Scissors, one steel Director, three silver Probes, one silver Caustic Case, one Compound Catheter, six yards Iron Wire, six Needles and Ligature Silk.. $23.00

No. 14. REED'S POCKET CASE.

Turkey morocco Case, silk-velvet lining, silver lock. Instruments double-bladed, Tortoise shell Handles, slide-catch. Contents: One Scalpel and probe-pointed Bistourie, one sharp-pointed Bistourie and Tenotome, one Gum Lancet and Tenaculum, one pair of straight Scissors, one pair Bulldog Artery Forceps with spring-catch, one pair Dressing Polypus Forceps, one Spatula and Elevator, one steel Director, two silver Probes, one Metacarpal Saw, one Thumb Lancet, one Exploring Needle, one Compound Catheter and Caustic Case of sterling silver, six Needles and Ligature Silk.. $27.00

No. 15. HAMILTON'S POCKET SET.

Turkey morocco Case, lined with silk-velvet, silver lock. Instruments double-bladed, Tortoise-shell Handles with spring-catch. Contents: One large Scalpel and Exploring Needle,

MINOR OPERATING.

FIG. 136. Tenaculum. See also FIGS. 12. 33.

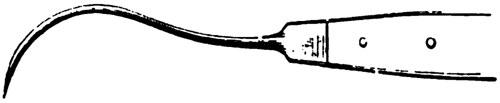


FIG. 137. Small Scalpel.

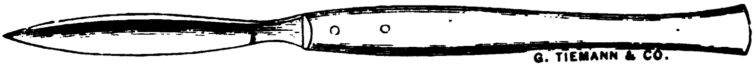


FIG. 138. Medium Scalpel.

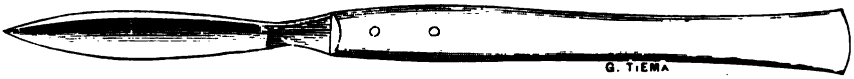


FIG. 139. Curved Probe-pointed Bistourie.

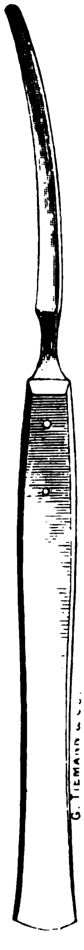


FIG. 140. Cooper's Hernia Knife.

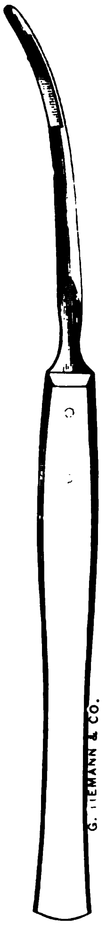


FIG. 141. Large Scalpel.

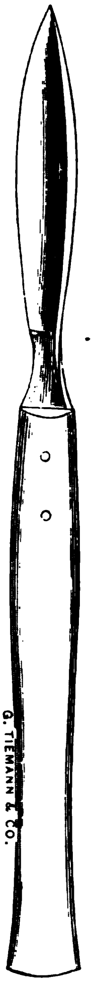


FIG. 142. Straight Finger Knife.

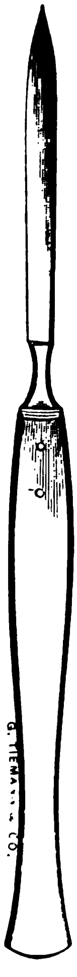
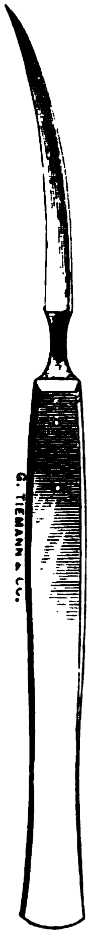


FIG. 143. Curved sharp-pointed Bistourie.



For Bistouries, Scalpels and Tenotomes see also p. 6.

one medium and one small Scalpel, one Tenaculum and aneurism Needle, one sharp and one blunt-pointed Tenotome, one Metacarpal Saw, one pair of Bull-Dog Artery Forceps with spring-catch, one pair of slide-catch Tortion Forceps, one pair of straight Scissors, one Thumb Lancet, one set of silver Probes and Nelaton's Bullet Probe, one Male and Female Catheter and Caustic Holder of sterling silver, six Needles and Ligature Silk $32.00

The same without the Catheter and Caustic Case.......... .... $27.00

No. 16. FINE FOUR-FOLD POCKET CASE.

The Contents of this Set are the same as in No. 4. But the Instruments are all of the very best quality and finish; Tortoise-shell Handles with spring or slide-catch. The Catheters and Probes are of sterling silver. This Set is put up in a very neat Turkey morocco Case with a silver lock $36.00

No. 17 REGIMENTAL SURGEONS' POCKET SET.

Russia leather Case with strong German silver lock. Instruments plain, single-bladed, Tortoise-shell Handles. Contents: One Scalpel, one sharp-pointed Bistourie, one probe-pointed Bistourie, one Finger Bistourie, one Gum Lancet, one Thumb Lancet, one small Razor, one pair of Dressing Forceps, one Artery Needle, six Surgeon's Needles, one Exploring Needle, one Tenaculum, one pair of Scissors, one steel Director, three silver Probes, one silver gilt Caustic Holder, one Compound Catheter, three yards of Iron Wire for Sutures, one pair of plain Artery Forceps, one Tenotome, Ligature Silk and Wax $23.00

No. 18. DUGAS' POCKET SET.

Turkey morocco Case lined with silk-velvet, silver lock, and chamois-leather pouch. Instruments have Tortoise-shell Handles with a very firm slide-catch, two strong blades in one handle. Contents: One jointed Porte Caustic for nitrate of silver and sulphate of copper and one Cataract Needle and one male and female Catheter made of sterling silver, one pair of Dissecting, Artery and Needle Forceps, one Thumb Lancet, one pair of delicate Artery Forceps, one Spatula and Elevator, one Belocq's Sound of sterling silver, one pair of curved Scissors, one Ear Spoon and Tumor Hook, one grooved Director of sterling silver, two Eye Probes, two Probes and Director Probe of sterling silver, one Porte Méche, one pair of Polypus and Shot Forceps, one Dupuytren's Probang with three silver joints and silver basket, one large and one small French Finger Knife, one large and one small straight Bistourie, one straight probe-pointed Bistourie and Tenotome, one Gum Lancet and Exploring Needle, one Tenaculum and Artery Needle, six curved and six straight Needles, Silver Wire and Silk Sutures............................... .... $56.00

No. 19. DUGAS' DRESSING CASE.

One morocco Case lined with silk velvet, silver lock. Contents: One silver Caustic Case, one Dissecting Artery and Needle Forceps, one Thumb Lancet, one pair of straight Scissors, one grooved Director, one silver Probe with an eye, one silver grooved Probe, one large and one small straight Bistourie, one Tenaculum and Gum Lancet, six Needles and Suture Silk, $18.00

No. 20. J. R. WOOD'S POCKET SET.

Morocco Case lined with silk velvet. Instruments double bladed, Tortoise-shell Handles with spring or slide catches. Contents: One Scalpel and Gum Lancet, one Scalpel and Teno-

MINOR OPERATING.

Fig. 144.—Peter's Hernia Director.

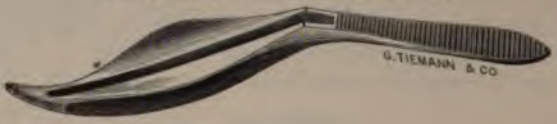


Fig. 145a.—Hamilton's Dry Dissector.

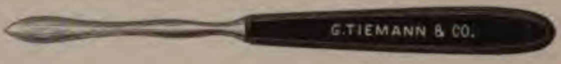


Fig. 145b.—Hamilton's Dry Dissector.

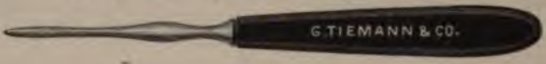


Fig. 145c.—Hamilton's Dry Dissectors.

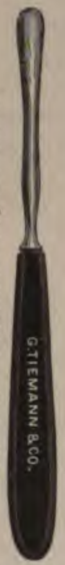


Fig. 146.

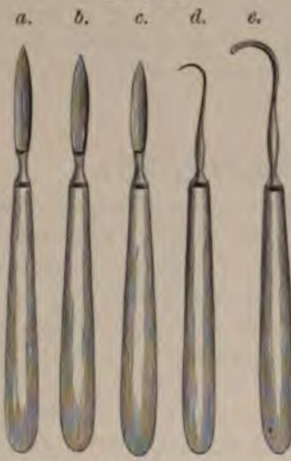


Fig. 147.

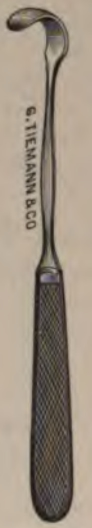


Fig. 148.

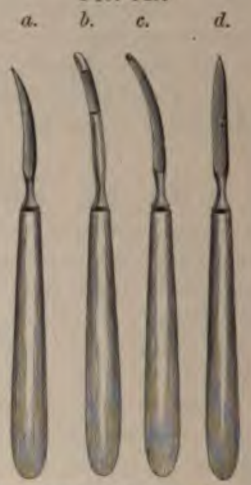


Fig. 145d.—Hamilton's Dry Dissector.

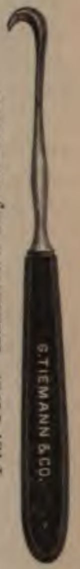
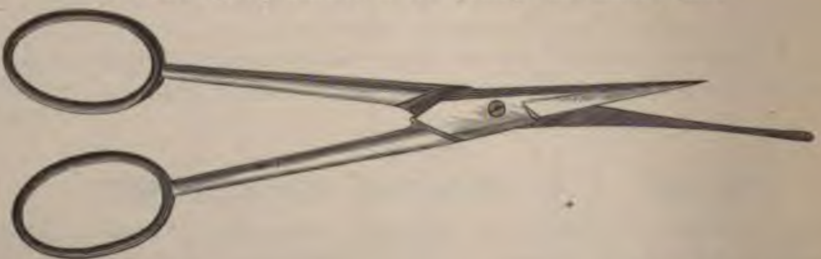


Fig. 146a.—Little's large Scalpel.
b.—Little's medium Scalpel.
c.—Little's small Scalpel.
d.—Little's Tenaculum.
e.—Little's Aneurism Needle.

Fig. 147.—Little's Retractor.
Fig. 148a.—Little's sharp-pointed Bistoury.
b.—Little's Hernia Knife.
c.—Little's probe-pointed Bistoury.
d.—Little's straight Bistoury.

The extremity of the handles are rounded off and brought to a dull edge to use in dry dissecting.

Fig. 149.—Artery Scissors, or for opening other small Canals.



tome, one sharp and one probe-pointed Bistourie, one Aneurism Needle and one Exploring Needle, one Compound Male and Female Catheter and Caustic case, one pair of straight Scissors, one Pair of Dressing Polypus Forceps, one pair of Hamilton's Artery Forceps, one pair of plain Artery Forceps, one grooved silver Probe and Nelaton's porcelain head in three parts united by screw, one Lancet, two plain silver Probes, one coil silver Suture Wire, six Needles and Ligature Silk.. $27.50

No. 21. TIEMANN & CO.'S PATENT POCKET CASE.

PATENT CATCH INSTRUMENTS. See FIG. 185.

A very neat and compact Case of Turkey morocco, with silver lock. Contents: Two patent catch Handles, one Post's Exploring Needle, one Tenaculum, one Gum Lancet, one sharp-pointed Bistourie, one probe-pointed Bistourie, one Tenotomy Knife, one large Scalpel, one small Scalpel, one Finger Knife, one Metacarpal Saw, one Lancet, one pair of straight Scissors, one pair of Dressing Forceps, one pair of spring-catch fenestrated Artery Forceps, one Spatula, one grooved Director and Aneurism Needle, two silver Probes, one Compound Catheter of sterling silver, one Caustic Case of sterling silver made *seamless*, six Needles and Suture Silk, two coils of silver Suture Wire.... .... $33.00

No. 22. EXHIBITION POCKET SET, extra size.

Five-fold Turkey Morocco Case with one inner and one outside silver lock, containing: Our patent-catch Instruments, two large and two small Tortoise-shell patent catch Handles, one moveable back Saw and one Amputating Knife, both 5 inch blades, one Amputating Scalpel, two assorted Scalpels, one Tenotome, one Gum Lancet, one blunt-pointed straight Bistourie, one curved probe-pointed Bistourie, one curved sharp-pointed Bistourie, one Post's Wire Needle, one Cataract Needle, one Cooper's Hernia Knife, one Tenaculum, one Exploring Lancet, one Aneurism Needle, one Belocq's Sound for epistaxis (silver), one silver Male and Female Catheter with Caustic Case, one Abscess Lancet, one Thumb Lancet, one Weir's Vaccinating Lancet, one Seton Needle, one pair of straight Scissors, one pair of angular Scissors, one fenestrated spring-catch Artery Forceps, one Tortion Forceps, one Prout's Needle Forceps with slide-catch, one pair of Polypus and Dressing Forceps, combined with Tiemann & Co.'s Bullet Extractor, Uterine and Œsophagus Forceps and Vulcellum Forceps, Ligature, Suture Needles, Plastic Pins, silver and Iron Wire, Serrefines, one pair of fine curved-up Scissors, one Thumb Forceps for extracting splinters, &c., one Exploring Trocar, one Trocar for hydrocele and ascites, one set of silver Probes with Nelaton's Bullet Probe, one Director, one Porte Mèche, one whalebone Probe, one Artery Constrictor, one Ear-Scoop and Hook to remove foreign bodies, one Spatula with Elevator.. $100.00

TREPANNING SET.

CONTENTS: One Galt's Trephine, one Crown Trephine, one Trephine Handle, one Trepanning Scalpel and Raspatory, one Trepanning Elevator, one Hey's Skull Saw, one Brush for cleaning Trephines and Saw. in a Mahogany Case............................ .... $16.00

MINOR OPERATING.

FIG. 150. Angular Operating Scissors.

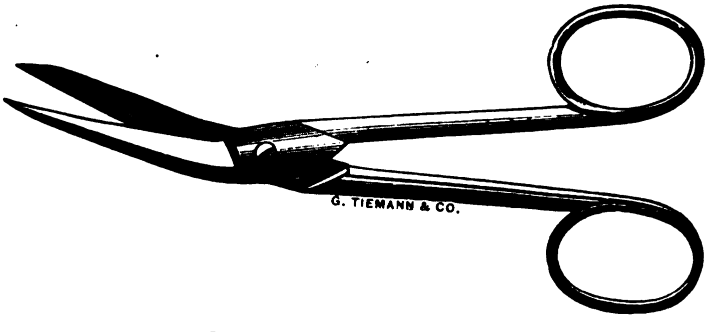


FIG. 151. Dissecting Scissors.

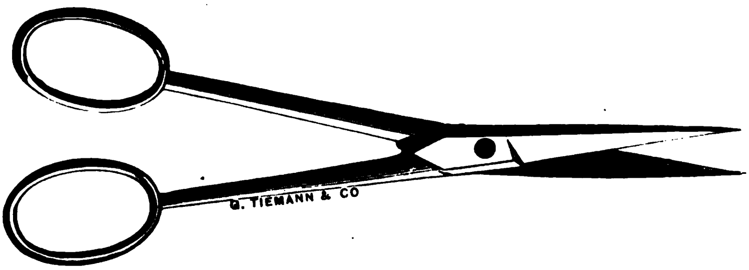


FIG. 152. Operating Scissors, curved on the flat.

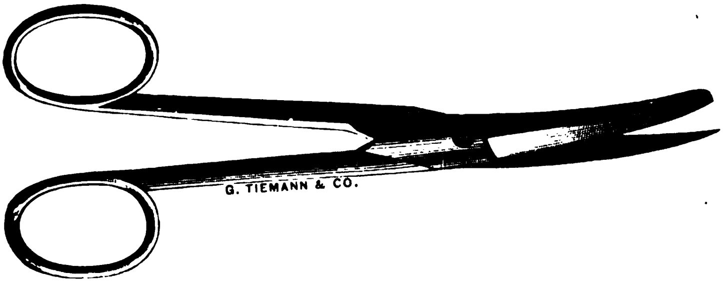


FIG. 153. Polypus Dressing Forceps, double crossing

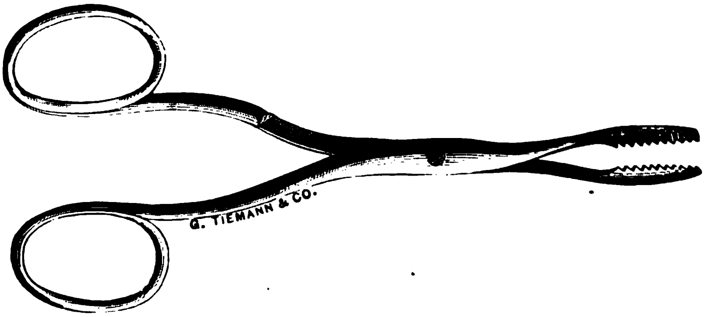
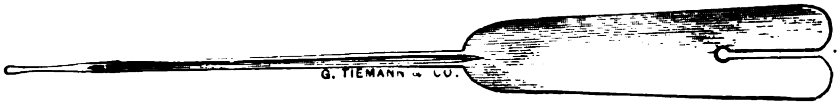
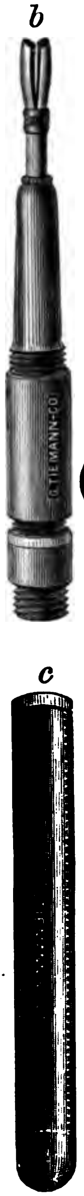
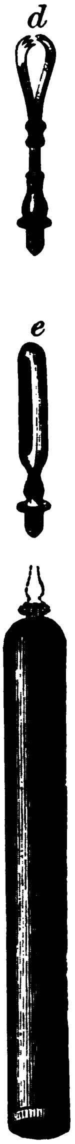


FIG. 154. Delicate Probe Director and Tongue Tie.







154*b* *c* *d* *e*. Dugas' Caustic Case.

F. A. Stohlmann **Edward Pfarre.**

No. 23. SAYRE'S POCKET SET.

Two-fold morocco Case. One sharp and blunt-pointed Tenotome, one Tenaculum and sharp-pointed Bistoury, one Scalpel and probe-pointed Bistoury, one Finger Knife, one pair plain Artery Forceps, one pair straight Scissors, one Director and Tongue-Tie, one pair silver Probes, one Compound Catheter, silver, one silver Caustic Case, seamless, six Needles, Silk and Wax. $23.50

No. 24. LITTLE'S POCKET SET.

Two-fold Russia leather Case, Instruments slide catch, Turtle Shell handles. One Scalpel and sharp-pointed Bistoury, one Tenaculum and probe-pointed Bistoury, one Gum Lancet and Tenotome, one Hernia Bistoury and Finger Knife, one pair angular Scissors, one pair Polypus dressing Forceps, one pair fine Thumb Forceps, one Weir's Vaccinating Lancet, one Exploring Needle, one Spatula with Tongue-Tie, one Director and Aneurism Needle, one Parker's silver Catheter and Caustic Case, two silver Probes, six Needles, Silk and Wax.........$25.00

With Thermometer...$28.00

No. 25. HELMUTH'S POCKET SET.

Either two- or three-fold morocco Case. One Tenaculum and Hernia Knife, one Scalpel and Tenotome, one sharp and probe-pointed Bistourie, one Prout's Needle Forceps, one pair fenestrated Artery Forceps, one pair plain Artery Forceps, one pair Dressing Forceps, one pair Scissors, one Uterine Sound, to screw apart, one Thermometer, one Compound Catheter and Caustic Case, plated, one steel Director, two Probes, one Exploring Trocar, one Hook and Adjuster, six Needles, Silk, Wax...$32.00

No. 26. CROSBY'S POCKET SET.

One-fold morocco Case. One Scalpel and probe-pointed Bistoury, one Tenotome and sharp-pointed Bistoury, one Tenaculum and Exploring Needle, one pair Artery Forceps, one pair Scissors, one Director and Aneurism Needle, two Probes, six Needles, Silk, Wax........$15.00

No. 27. MINOR'S POCKET SET.

Two-fold morocco Case. One pair spring-catch Forceps, one pair Hamilton's Artery Forceps, one Tenaculum and Aneurism Needle, one sharp- and one blunt-pointed Tenotome, one sharp-pointed Bistoury and Scalpel, one silver Probe and Director, one pair Scissors, six Needles, Silk, one silver Catheter and Caustic-Case.................................$22.50

MINOR OPERATING.

FIG. 155. PARKER'S Compound Catheter and Caustic Holder.

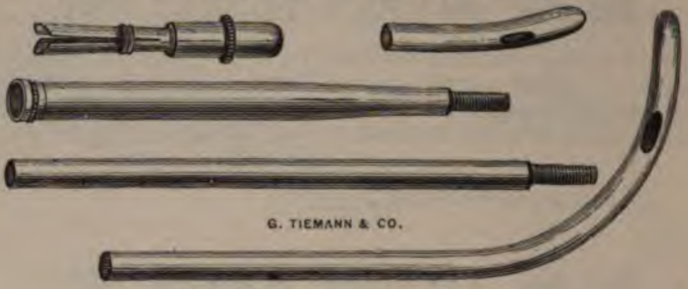


FIG. 156. Compound Catheter.

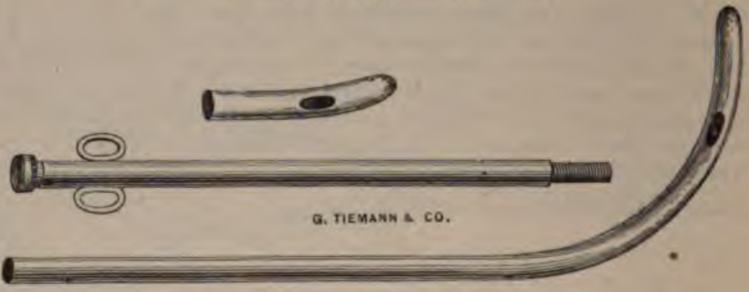


FIG. 159b. Caustic Case, Hard Rubber and Silver.

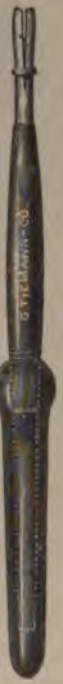


FIG. 157. Dressing Forceps.

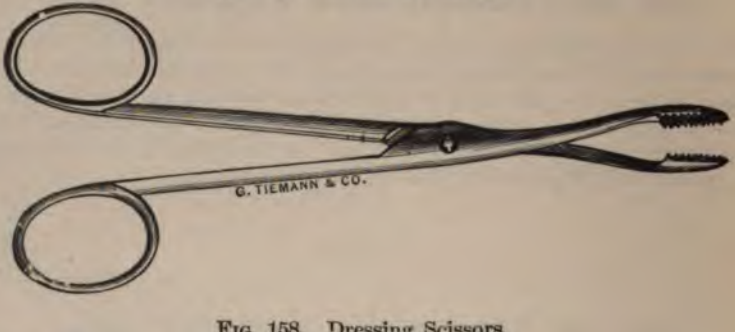


FIG. 159c. Caustic Case, Silver.

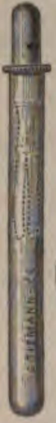


FIG. 158. Dressing Scissors.

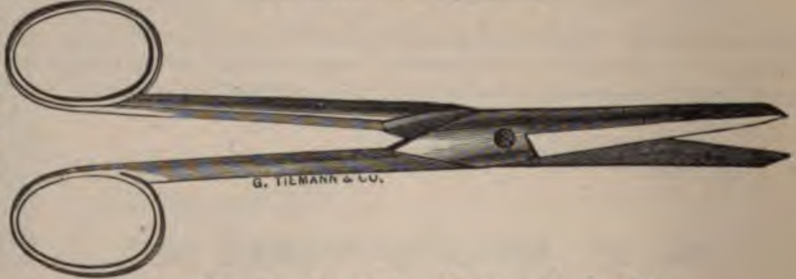
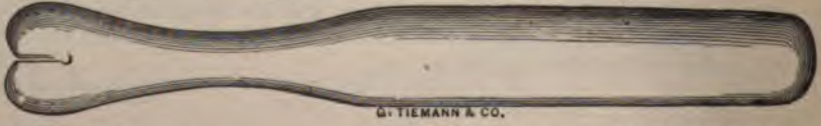


FIG. 159. Spatula. Made of Steel or Hard Rubber.



No. 28. WIGHT'S POCKET SET.

Two-fold Frame Case. One Scalpel and Finger Knife, one Tenotome and sharp-pointed Bistoury, one Scalpel and probe-pointed Bistoury, one Tenaculum and Gum Lancet, one pair Wight's Artery Forceps, one pair Thumb Forceps, one Sand's Needle Holder, one Exploring Needle, one pair straight Scissors, one pair curved Scissors, one Thermometer in hard-rubber Case, one Parker's Catheter and Caustic Case, one Director and Aneurism Needle, two silver Probes, one Metacarpal Saw, six Needles, Silk, Wax.......................... $37.00

No. 29. WEIR'S POCKET SET.

Either two- or three-fold morocco Case. One Aneurism Needle and sharp-pointed Bistoury, one Gum Lancet and probe-pointed Bistoury, one Hernia Knife and Tenaculum, one Tenotome and Scalpel, one pair Scissors, one Director, two Probes, one Thermometer in silver Case, one pair Thumb Forceps, one pair Dressing Forceps, one Weir's Vaccinating Lancet, one silver Female Catheter and Caustic Holder, one Stimson's Hypodermic Syringe, six Needles, Silk, Wax, Wire.......................... $30.00

No. 30. GAY'S POCKET SET.

SPRING-BACK INSTRUMENTS.

Morocco Case, 4 inches long by 2 wide, silver lock. One Tiemann & Co.'s bent Thermometer, one patent Hypodermic Syringe, one Scalpel and probe-pointed Bistoury, one Gum Lancet and Tenotome, one Female Catheter and Caustic Case, one Gay's Scissors, both rings open (Fig. 175b), one pair Artery Forceps, plain, one Spatula and grooved Director Probe, steel, one silver Director Probe, one silver Probe, six straight Needles, Silk, Wax............ $22.00

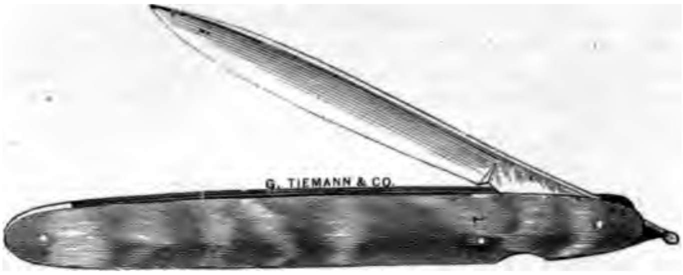
No. 31. ANDREWS' POCKET CASE.

Black hard rubber Case, with nickel-plated mountings, the instruments placed on metallic rests, so as to dispense with velvet lining. One Scalpel, one curved sharp pointed Bistoury, one curved blunt pointed Bistoury, one Tenotome, one Tenaculum, one grooved Exploring Needle, one Abscess Lancet, one pair Scissors, one pair Dressing Forceps, one pair Artery Forceps, toothed, one pair Andrew's toothed bull-dog Forceps, one combined Catheter, one Andrew's pocket case Saw, one ivory card for Ligature, one grooved Director, one Probe, 6 Needles, kept in a little compartment with a metallic, nickeled lid.

The first seven instruments each in a thin ivory handle, the length not to exceed 5 inches, these are set up edgewise in the Case. (Figs. 17, 18, &c., page 6).................... $28.00

MINOR OPERATING.

FIG. 160. Plain Shell Handle Pocket Instrument.
Single bladed.



viz: Curved Bistouries, sharp and probe-pointed Scalpels, large and small French Finger Knives, Tenaculums, Gum Lancets, Abscess Lancets, Thumb Lancets, Vaccinnating Lancets, &c.

FIG. 161. Seton Needle.

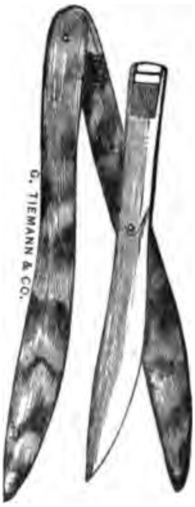


FIG. 162. Plain double bladed Pocket Instrument.

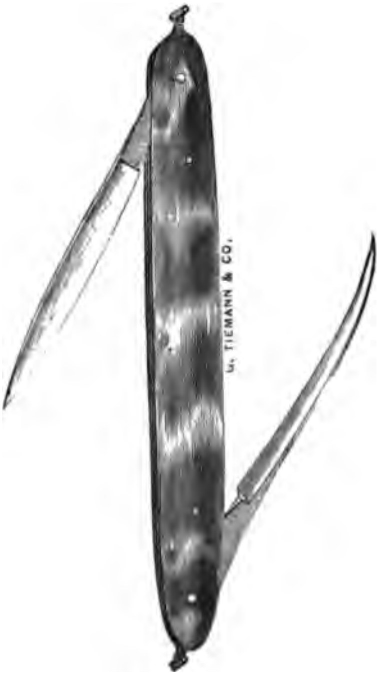
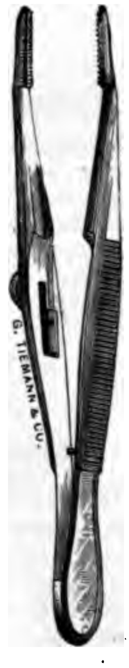


FIG. 163. Tortion Forceps



No. 32. WOODWARD'S POCKET SET.

(By Dr. WOODWARD, Surgeon General Marine Hospital Service, U. S.)

Two-fold red morocco Case, with metal hinge and lock, very flat. One male and female Cathether, silver, one Vaccinating and one Exploring Lancet, concealed inside of the Cathether, one open ring Dressing Forceps, answers for holding needles also ; one pair of Scissors with one open ring, one Tenotome and Scalpel, white handle, spring back; one sharp-pointed and one probe-pointed Bistoury, white handle, spring back ; one Abscess Lancet, one silver Ear Spoon and Probe, one steel Tenaculum and delicate Ear Hook, one Director and Sim's Adjuster, six Needles, Silk and Wax.

Price.. $22.00

No. 33. MASON'S POCKET CASE.

Fine two-fold morocco Case. One Scalpel and Gum Lancet, one Scalpel and probe-pointed Bistoury, one sharp-pointed Bistoury and blunt-pointed Tenotome, one Tenaculum and Aneurism-Needle, (all of these Tortoise-shell handles with slide catches); one pair Hamilton's Artery Forceps, one pair silver Probes, one German-silver Director, one pair small Thumb Forceps, one pair fine Polypus dressing Forceps, one fine Thumb Lancet, shell handle, one Parker's plated Catheter, one pair straight Scissors, one fine self-registering Thermometer, six Needles, Silk, Wax..$30.00

LITTLE'S GENERAL OPERATING SET.

Two Screw Handles, to fit, one large and one small Amputating Knife and one Bow Saw, one pair Phelps' Torsion Forceps, one pair plain Artery Forceps, one pair Bone Forceps, one Spiral Tourniquet, one Nelaton's Probe, one Tiemann & Co.'s Bullet Forceps, one Students' Aneurism Needle, one Director with Tongue-Tie, silver, one Hernia Director, one Trocar, one pair Polypus Forceps, one pair delicate straight Scissors, one pair strong Scissors, curved flatwise, one pair Cuskoe's Throat Forceps, one plain Trepanning Elevator, one curved Rongeur, one Van Buren's Sequestrum Forceps, one plain Chisel, one plain Gouge, one Pereosteotome, one Galt's Trephine, three sizes Scalpels, one French Finger Knife, one sharp-pointed Bistoury, one probe-pointed Bistoury, one Hernia Knife, two Retractors, one Tenaculum, one plain Aneurism Needle, one fine silver Probe, two silver Probes, three plated Catheters, one Prostatic Catheter, three steel Sounds, twelve Needles, Silk, silver Wire, Plastic Pins, Wax.

Rosewood Case, brass bound, lined with oil-dyed silk velvet..........................$100.00

LITTLE'S MINOR OPERATING SET.

Three sizes Scalpels, one sharp-pointed Bistoury, one probe-pointed Bistoury, one Finger Knife, one Tenaculum, one Hernia Knife, one pair Thumb Forceps, one pair Phelps' Artery and Torsion Forceps, one Aneurism Needle, two Retractors, one Peter's Hernia Director, one Trocar and Canula, one pair angular Scissors, one German silver Director, two silver Probes, one small curved Rongeur, six Needles, Silk, Wax, Wire.

Rosewood Case, lined with oil-dyed velvet..$37.00

MINOR OPERATING.

FIG. 164. Spear-pointed Thumb Lancet.

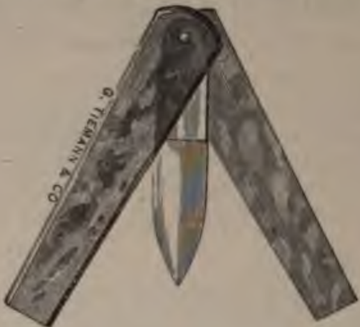

G. TIEMANN & CO.

FIG. 165. Abscess Lancet.

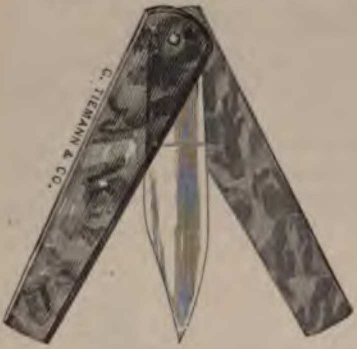

G. TIEMANN & CO.

FIG. 166. Broad-pointed Thumb Lancet.

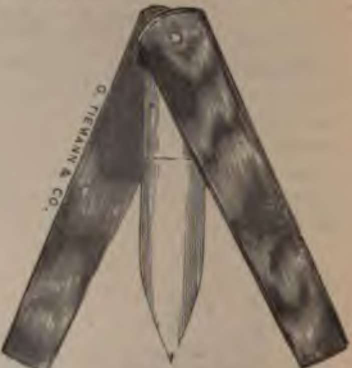

G. TIEMANN & CO.

FIG. 167. COOPER'S Hernia Knife

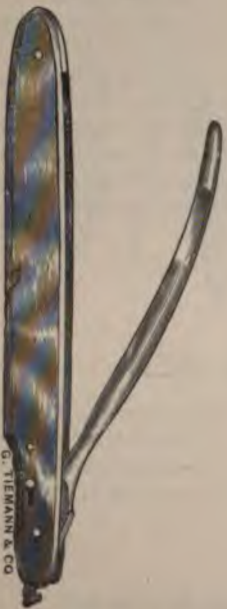

G. TIEMANN & CO.

FIG. 168. Curved Probe-pointed Bistourie.

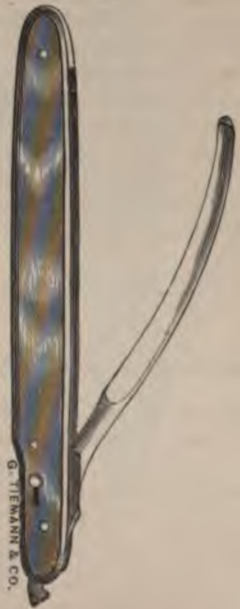
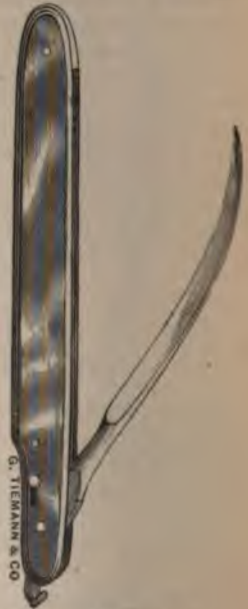
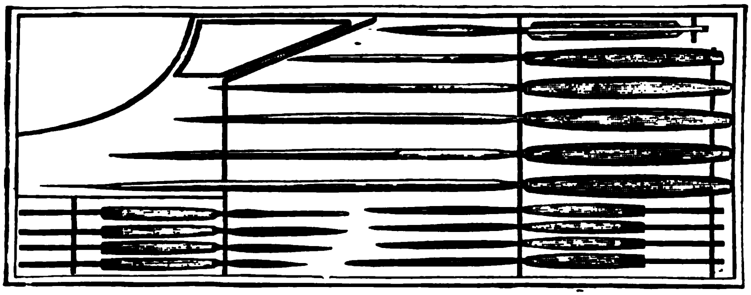

G. TIEMANN & CO.

FIG. 169. Curved sharp-pointed Bistourie


G. TIEMANN & CO.

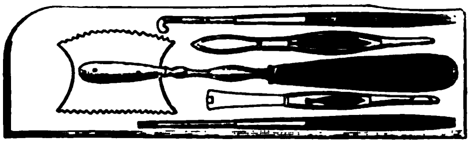
Slide-catch Pocket Instruments with Turtle-shell Handles.

OTIS' U. S. A. COMPACT FIELD SET.



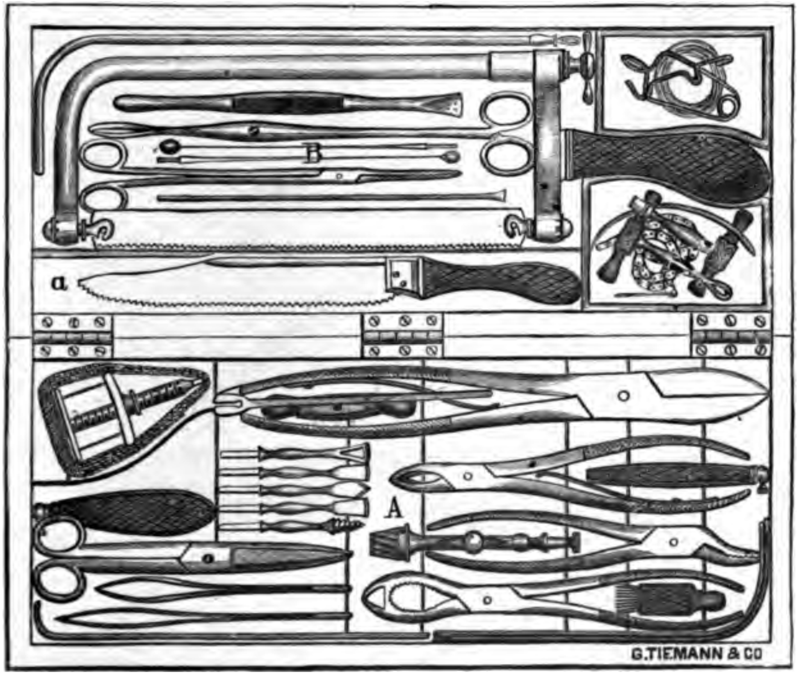
TRAY No. I.

Fitting over the compartment *A*, contains :—One strong Cartilage Knife, one small Amputating Knife, one medium Catling, one medium Amputating Knife, one large Catling, one major Amputating Knife, one straight sharp-pointed Bistoury, one curved sharp-pointed Bistoury, one probe-pointed curved Bistoury, one long straight probe-pointed Bistoury, one Tenaculum, one large Scalpel, one small and one very small Knife for dissections and ligations.



TRAY No.2.

Fitting into compartment, *B*, contains : one Hey's Saw, one Torsion Forceps, one Needle Forceps, one Artery Needle Holder with 4 points and 1 key.



MINOR OPERATING.

FIG. 170. Pocket-Scalpel with slide catch.

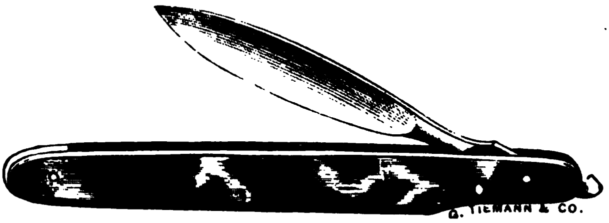
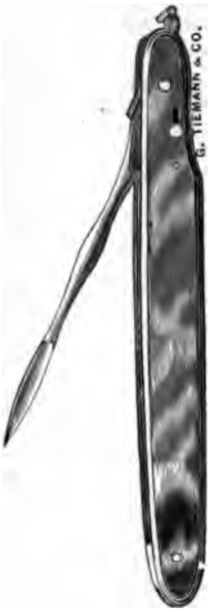
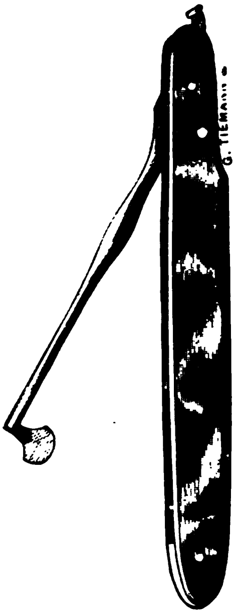

G. TIEMANN & CO.

FIG. 171. Tenotome FIG. 172. Gum Lancet. FIG. 173. Tenaculum.


G. TIEMANN & CO.

Slide-catch Pocket Instruments with


G. TIEMANN & CO.

Turtle-shell Handles.

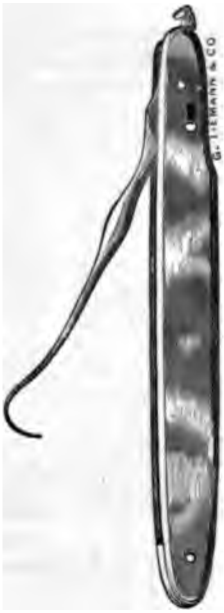
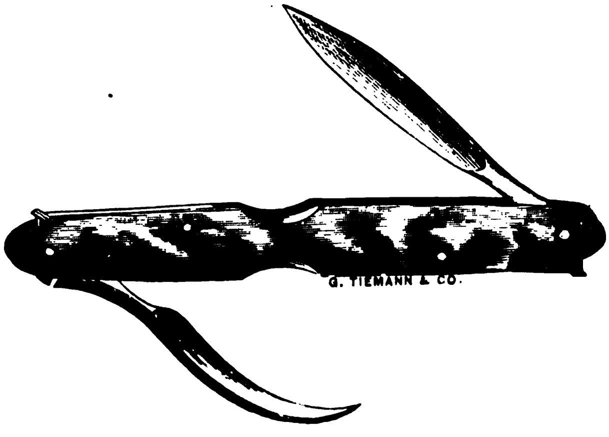

G. TIEMANN & CO.

FIG 174. SYME'S Abscess Knife and Scalpel.

Double Bladed Pocket Instrument,


G. TIEMANN & CO.

with Spring catches.

OTIS' COMPACT FIELD SET.

(CONTINUED.)

Compartment A contains :—One Tourniquet, one large Liston's Bone Forceps, one Rongeur, one Sequestrum Forceps, one Lion Forceps, one conical Trephine, one Trephine-brush, two German-silver Retractors, one Osteotome, handle with 4 points, one Tire-fond, one Oliver's curved Osteotome and Chain-Saw Conductor, one Scissors, one Dissecting Forceps, one Artery Forceps, one silver grooved Director.

Compartment B contains :—One major Saw with 2 extra narrower blades, one moveable back Saw, one English No. 6 gum elastic Cathether, one Elevator, one Bullet Forceps (Gross), one Tiemann & Co.'s Bullet Forceps, one long articulated Probe or *sonde de poitrine* with 2 Nelaton or porcelain tips, one burrheaded Ballsearcher, one Chain-Saw, rotating handles and needle, ten large Serresfines, two coils of annealed iron wire under the moveable back saw ; silk, linen and catgut Ligatures, Wax, silver suture Wire, surgeons' curved Needles, acupressure Pins, two silver Probes.

Mahogany Brass-bound Case, lined with oil-dyed velvet........................$160.00

DARBY'S COMPACT OPERATING SET.

One Amputating Knife, clasp-handle ; one Finger Knife, one Amputating Scalpel, one Aneurism Needle, one Operating Scalpel, one Tenotome, one hard rubber Trachea Tube ; four instruments, consisting of one Gouge and three Percosteotomes and Levators, fitted into one strong handle ; one folding Tourniquet, three Serres-fines, one Metacarpal Saw, one Hey's Saw, one Trepanning Elevator and Raspatory, one Catling clasp-handle, one Hamilton's spring catch Artery Forceps, one Torsion Forceps, one Darby's Forceps, one Galt's Trephine, 1 small Trephine, 1 Trephine Handle, one Bow-saw with two blades, one Darby's Rongeur and Bone-holder, 1 Chain-Saw and Needle, six Suture Needles, Silk, Pins, Wax, 1 Liston's Forceps.

Rosewood Case, lined with oil-dyed velvet..$80.00

MASON'S MINOR OPERATING SET.

IVORY HANDLE INSTRUMENTS WITH FERULES.

One Metacarpal Saw, four Scalpels, four Bistouries, one Tenotome, one Tenaculum, one set Fletcher's Aneurism Needles, one pair straight Scissors, one pair angular Scissors, one pair Dressing Forceps, one pair fine Thumb Forceps, one pair fenestrated Artery Forceps, one pair Prout's Needle-Forceps, one Hydrocele Trocar, one Exploring Trocar, one German Silver Director, one pair Silver Probes, Needles, Silk, Silver Wire.

Mahogany or Rosewood Case, lined with oil-dyed silk velvet.......................$44.00

MINOR OPERATING.

FIG. 175.—Four Bladed Spring-catch Pocket Instrument.

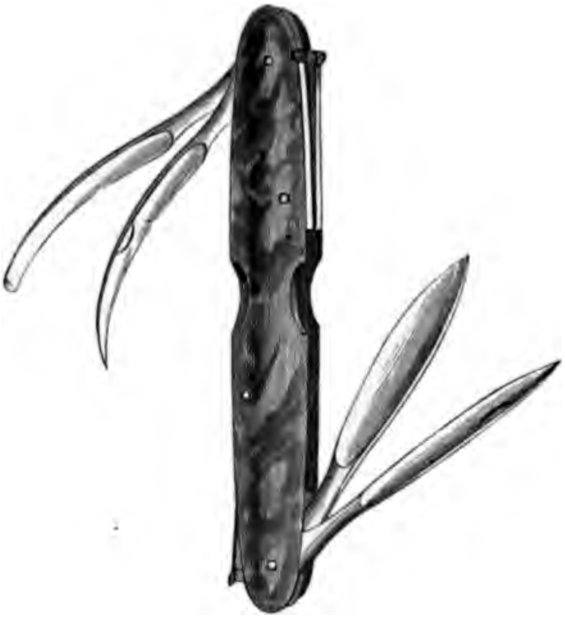

Turtle Shell Handle.
1 Scalpel, 1 Finger Knife, 1 curved probed-pointed Bistourie,
1 curved sharp-pointed Bistourie.

FIG. 175*b*.—Gay's Open Ring Scissors.

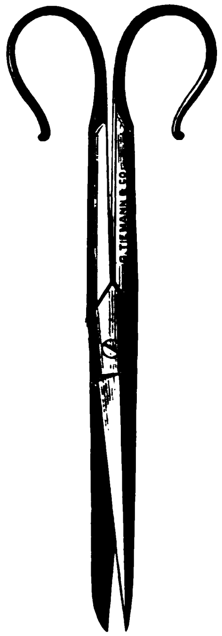
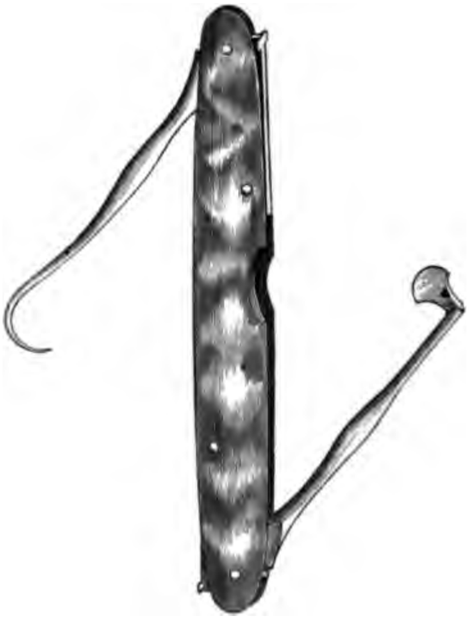


FIG. 176.—Two Bladed Spring-catch Pocket Instruments.



F. A. Stohlmann. **Edward Pfarre.**

Fig. 177. Scalpel and Probe-pointed Bistourie

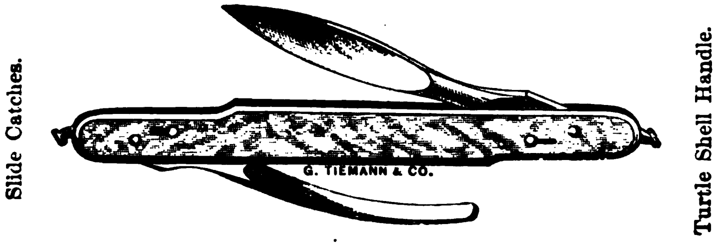


Fig. 178. Silver Probes.

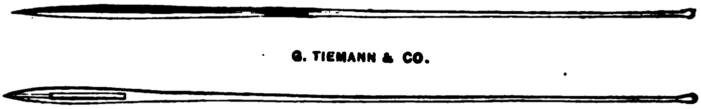


Fig. 179. Tenaculum and Gum Lancet.

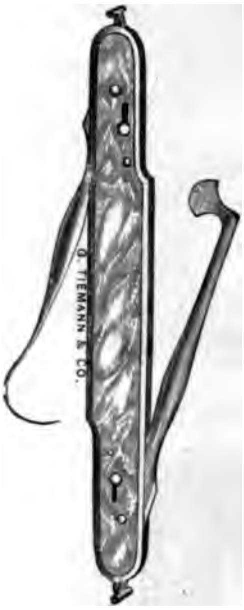


Fig. 180. Post's and Buck's Needles.

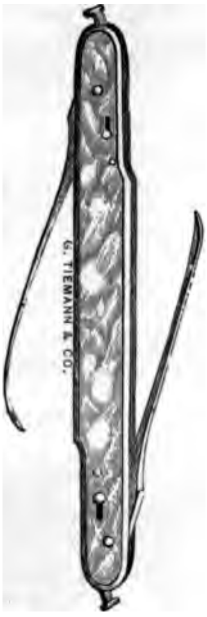


Fig. 181. Sharp-pointed Bistourie and Tenotome

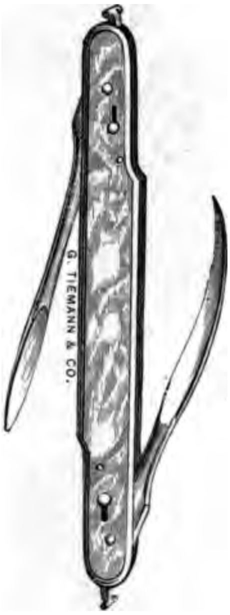


Fig. 182. Director and Aneurism Needle.

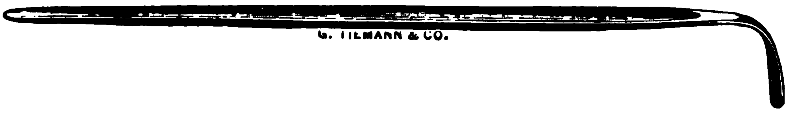


Fig. 183. Port méche.

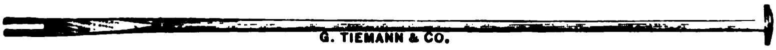
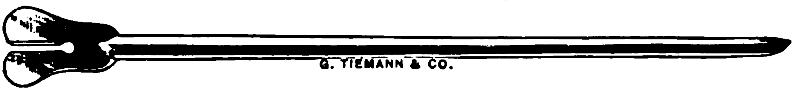
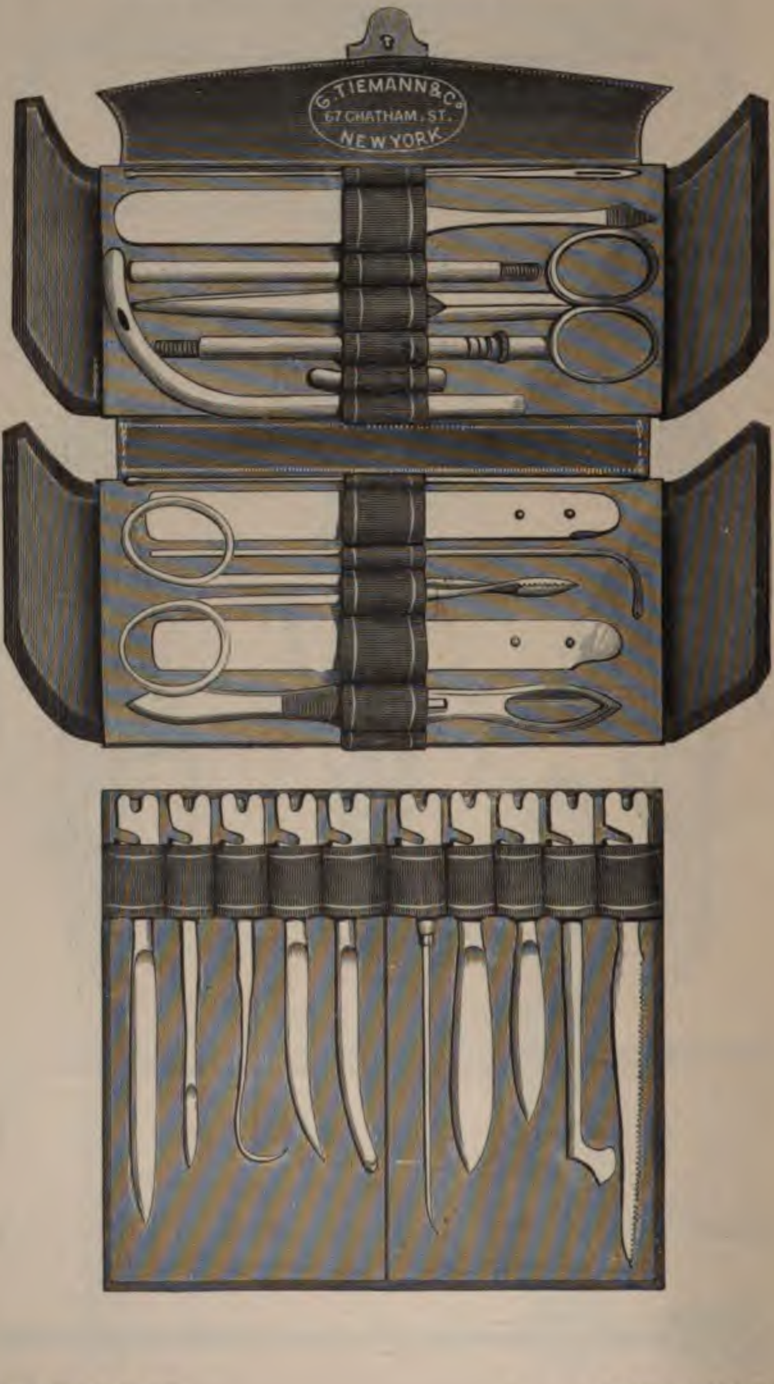


Fig. 184. Director and Tongue Tie.



MINOR OPERATING.

FIG. 185.—Tiemann & Co.'s Patent-Catch Pocket Set.



F. A. Stohlmann. **Edward Pfarre.**

SUTURE NEEDLES.

FIG. 186.—Stimson's Needle Holder and Cutting Forceps.

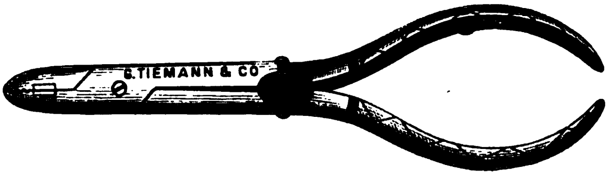


FIG. 187.—Open Eyed Needle.

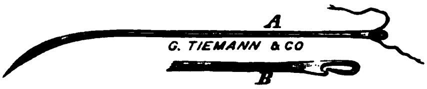


FIG. 188.—Full Curve Suture Needles.

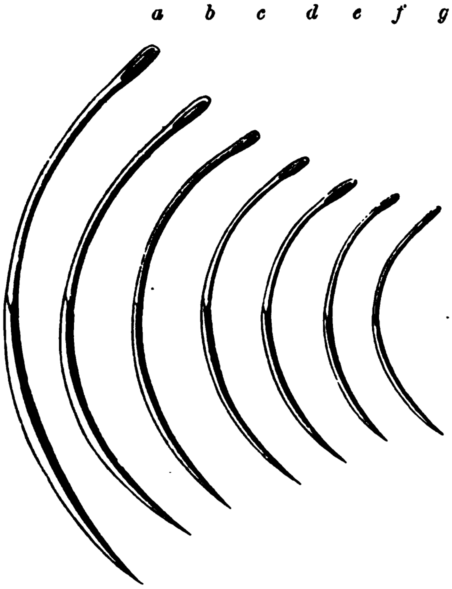
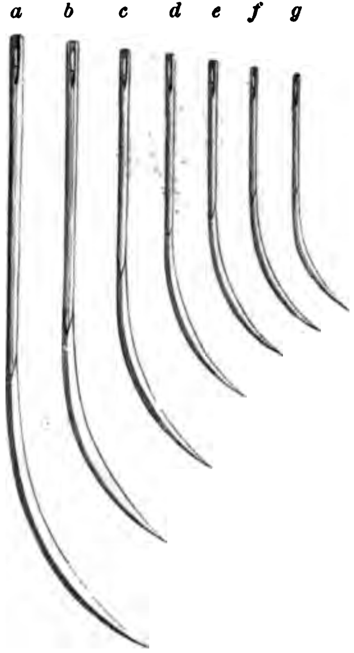
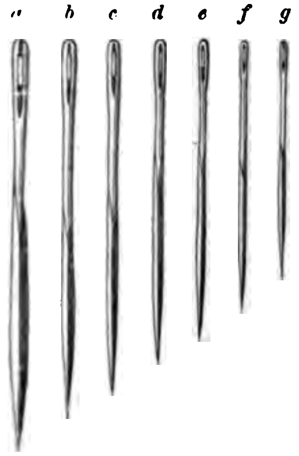


FIG. 189.—Half Curve Suture Needles.



Satin Sewing Silk, page 16.

FIG. 190.—Wire Suture Needles.



	PER COIL.
Silver Wire for Sutures	$0.50
Iron, annealed	.02

Price of Needles.

	EACH.
Full Curve, any size	$0.10
Half Curve, any size	.10
Straight flat Needles	.10
Wire Suture Needle, triangular	.05

Fine Suture Needles for operations on the Eyes and Lids, straight or curved	.15
Sim's Needles for Vesico-Vaginal Fistula	.15
Bozeman's Needles for Vesico-Vaginal Fistula	.40
Emmett's Needles for Vesico-Vaginal Fistula	.15
Stohlmann's Wire Needle	.50
Greenville Dowell's Needle for Hernia	.75
Shrady's open-eyed Needle	.25
Platt's open-eyed Needle	.25

CUPPING.

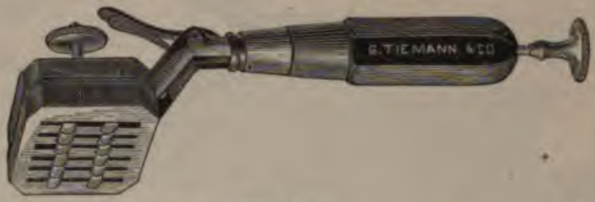


Fig. 191.—Tiemann & Co.'s Patent Scarificator.

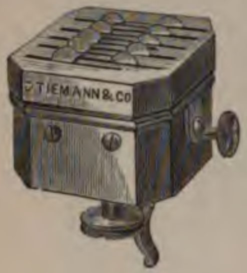


Fig. 192.
Ten-Bladed Scarificator.

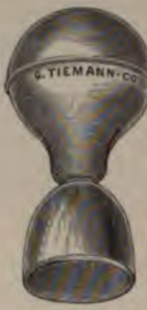


Fig. 193.
Glass and Rubber Cup.

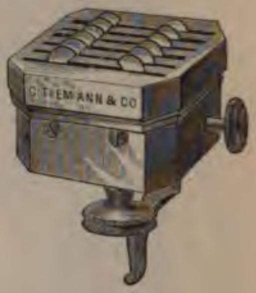


Fig. 194.
Twelve-Bladed Scarificator.

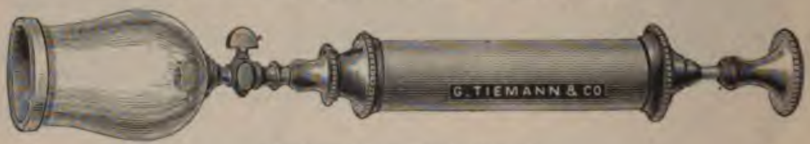


Fig. 195.—Cupping Pump, Stopcock and Cup.

Dry Cupping, page 112, Part IV.

No. 1. CUPPING SET.

Contains: One Brass Cupping Pump, three Stopcocks, three Glass Cups, one Ten-Bladed Scarificator, one Mahogany or Black Walnut Case, lined with velvet $13.00

No. 2. CUPPING SET.

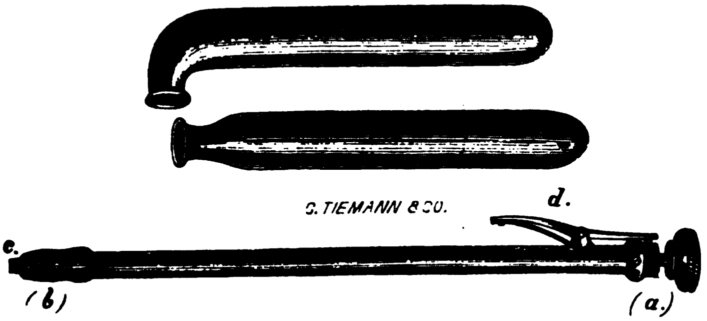
Contains: One Brass Cupping Pump, three Stopcocks, six Glass Cups, one Twelve-Bladed Scarificator, one Mahogany or Black Walnut Case lined with velvet........ $15.00

No 1. Without Scarificator	$9.00
No. 2. Without Scarificator	10.50

Also, Breast Pumps.

LEECHING.

FIG. 196.—Tiemann & Co.'s Patent Artificial Leech.



The principal feature is the employment of light glass tubes, from which the air is expelled by the vapor of ether, and which imitate very closely the suction of the natural leech as the vapor within them condenses.

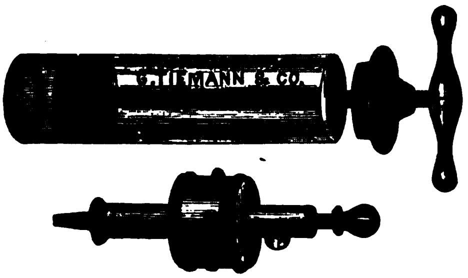
To expel the air from a tube, a few drops of ether are poured into it, and it is then immersed as far as the mouth in hot water until the ether boils briskly. The mouth of the tube is then applied to the skin, and held for an instant, when it will be found to be firmly attached, and can be left to itself. Each tube will draw about two drachms of blood. For uterine practice they are made long enough to be applied through a speculum.

The scarifier is simply a tube ¼ inch in diameter, straight or curved, having a cutting edge at one extremity. By a simple device this is made to rotate rapidly, making, when applied to the skin, a circular incision, the depth of which is regulated by a gauge.

In the cut (*a*) represents the button, by turning which the instrument is wound up, (*d*) the trigger, by which the spring is released, (*c*) the cutting edge, and (*b*) the gauge for regulating the depth of the incision.

The tubes for general use have the mouth on the side, but some are made straight, as more convenient of application in certain cases. The entire apparatus, including half-a-dozen tubes and a vial for ether, is contained in a small case adapted for the pocket. Price...........$7.00

FIG. 197.—Heurteloup's Artificial Leech.



The Scarifier has a circular cutter, passing through the centre of the Shaft; the depth of the cut is regulated and set by a thumb-screw. The motive power is a watch-spring, which after having been wound up, is set off by a trigger. After making the incision the blood is drawn by the pump, consisting of a glass barrel and a piston, with a screw arrangement to fix it when drawn up.

One Glass Pump and Cutter, contained in a neat Morocco Case.....................$8.00

Reese's Artificial Leech. FIG. 8, Supplement.

PHLEBOTOMY.

FIG. 198.
Plain Spring Lancet.

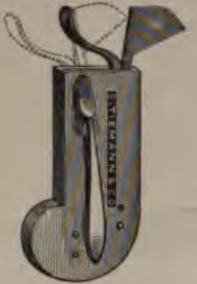


FIG. 199.
Tiemann & Co's
Spring Lancet.

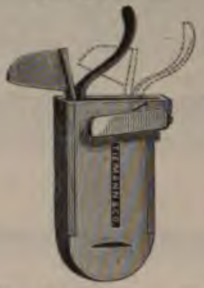
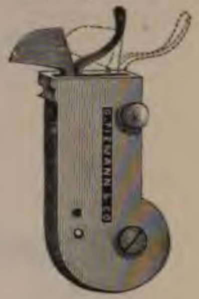


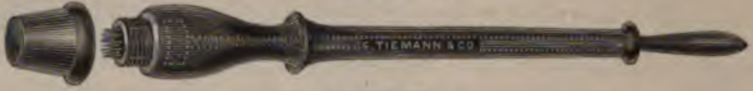
FIG. 200.
Button Trigger
Spring Lancet.



Thumb Lancets, page 56.

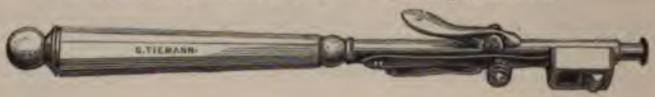
COUNTER IRRITATION.

FIG. 201.—Baunscheidt's Lebenswecker.
(Baunscheidt's Oil always on hand.)



VACCINATING.

FIG. 202.—Tiemann & Co's Vaccinating Scarificator.



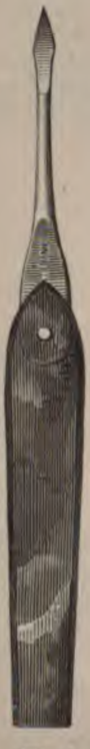


FIG. 203.—Vaccinating Lancet.

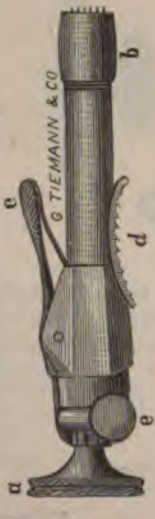


FIG. 204.—Dawson's Vaccinator.

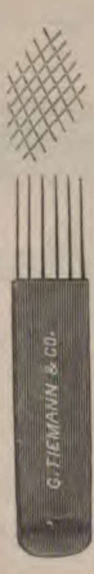


FIG. 205.—Carroll's Vaccinator.
G. TIEMANN & CO.

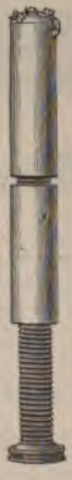


FIG. 206.—Teller's Vaccinator.

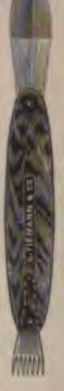


FIG. 207.—Weir's Vaccinating Lancet and Comb.

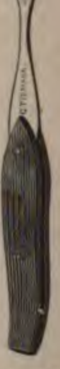


FIG. 208.—Weir's Vaccinating Lancet.

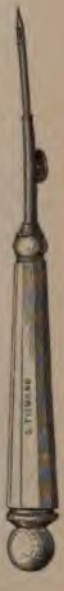
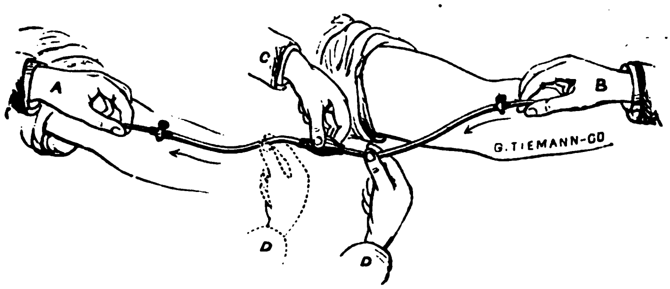


FIG. 209.—Tiemann & Co's Vaccinating Trocar.

F. A. Stohlmann. **Edward Pfarre.**

TRANSFUSION.

FIG. 210.—Aveling's Apparatus for Immediate Transfusion.



In Paper Case	$4.50
With one Scalpel and one pair of Forceps, put up in a neat Morocco Case	8.00

MODE OF OPERATION.

First place the Apparatus in a basin of tepid water, and while completely under the water, to fill it and ensure its cleanliness, compress the bulb until the air is expelled.

The patient having been brought to the side of the bed, and the arm bared, a fold of skin over a vein, at the bend of the arm should be raised, transfixed and divided. The flattened vein now brought into view, should be seized with a pair of fine forceps, raised while an incision is made in it, and the bevel-pointed silver tube inserted. In taking this tube out of the basin, it should be kept full of water, by placing the tip of the thumb over its larger opening. While the operator is doing this an assistant should prepare the arm of the blood-donor, as in ordinary bleeding, making an incision direct into the vein, and passing the round pointed tube into it, with its point towards the fingers. This person should then be brought to the bed-side of the patient, and seated in a chair. It is better not to secure the tubes in the veins by ligatures. *B* represents the hand of an assistant holding the efferent tube and the lips of the small wound together, and *A* shows the afferent tube secured in the same manner. The india-rubber portion of the apparatus, filled with water, and kept so by turning the cock at each end of it, is now fitted into the two tubes. The cocks are then turned straight, and the operation commenced by compressing the india-rubber tube on the efferent side *D*, and squeezing the bulb *C*; this forces two drachms of water into the afferent vein. Next shift the hand *D* to *D*, and compress the tube on the afferent side, then allow the tube to expand slowly when blood will be drawn into it from the efferent vein. By repeating this process any quantity of blood can, at any rate, be transmitted, the amount being measured by counting the number of times the bulb is emptied.

The advantages of this method of transfusing blood are :

1st. The chances of coagulation are small, because the blood is removed from the action of the living vessels for only a few seconds, and glides smoothly through the india-rubber pipe without being exposed to the air.

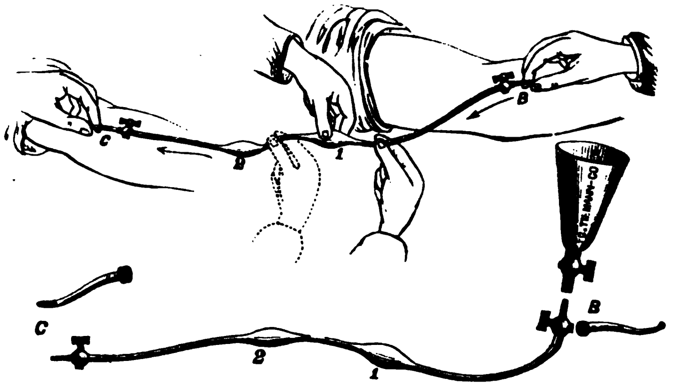
2d. The apparatus is effective, simple, portable, inexpensive and not likely to get out of order.

3d. The operation is safe, easy, uninterrupted, and a close imitation of nature.

TRANSFUSION.

FIG. 211.—Fryer's Transfusion Apparatus.

Price....$6.50.



(*Extracted from the Medical Record, April 15, 1874.*)

A few remarks on the Transfusion of Blood, with a modification of the Apparatus of Aveling.

By B. E. FRYER, M. D., Surgeon U. S. Army.

To show that the subject of transfusion is one which a large portion of the profession has not yet fully weighed the importance of, nor realized the fact that this measure can frequently be made applicable in cases which are now quietly otherwise yielded to death, we have only to call attention to the rarity of reported instances in which the operation has been taken advantage of, and refer to the many obvious ones in which it should be made available. Even in threatening dissolution from the direct loss of blood,—such as from wounds of large vessels, from prolonged epistaxis, or, in probably one of the most frequent opportunities met with, from hemorrage, post-partum, where the restoration of blood by transfusion has been, so to say, legitimatized—but few of us are prepared for the emergency, or if prepared, do promptly act and give the then almost only chance of life.

We will briefly state the kind of cases in which it has occurred to us that transfusion should be had recourse to without hesitation, and they may be conveniently noted under two heads.

We would include in the *first* class those cases in which a copious blood-loss has occurred and immediate death is threatened. As is well known, it is in these mainly that the measure has been applied. It might well be tried in cases of injury accompanied by a more moderate hemorrage, and where it is necessary to do an important surgical operation, and this operation is delayed (often disastrously) for a reaction by ordinary means. Moreover, it should be done before or after necessary surgical measures in the asthenic patients, in order to avoid pyæmia and its allied evils, especially in operations where the peritoneum is involved. After labor, too, where hemorrage may have been great, but not enough to threaten immediate death, it should be done to avoid septicæmic difficulties. For that depression from the loss of blood, &c., is a most direct cause of pyæmia and its pathological associates, those of us who have had to treat large numbers of gunshot and other injuries, and to operate in these cases, where hemorrage and other depressing causes had done sad havoc, well know.

But we have in the *second* class a larger number of cases—diseases both acute and chronic—and here we more commonly meet with opportunities. In such, transfusion has scarcely been thought of; but it is in these, too, it ought to be, and will be, we think, taken advantage of. Of the acute cases we refer to, those in which natural nutrition is for the time suspended, either from a direct lesion of the blood-making system in one or more of its divisions, or is indirectly affected in consequence of some profound systemic impression, where if we can but bridge over a short period by keeping life's machinery going, we may ultimately bring about a restoration of the healthy nutrition process, and thus save life. To particularize: acute gastric troubles, giving excessive and continuous vomiting; acute diarrhœas and dysenteries; in peritoneal inflammations, in some of the low forms of fevers where waste is excessive and the absorption of nourishment *nil*. In cholera it should be done more generally than it has been. It might be tried, too, in some of the acute diseases of young children, particularly in those which give convulsive movements and convulsions proper, and which often indicate to us diminished blood-supply to the brain, and tell us that death may come before the return of the natural food absorption can again put the nerve-centres *quietly* at work.

In chronic cases where the blood-making is reduced or nearly destroyed, we might often prolong life by transfusion. Such cases are not frequent, though we need not enumerate them. We might well apply the measure even in some cases of phthisis pulmonalis.

In regard to the fluid to be transfused. As is well known, human blood is that to be most desired, after this the blood of some of the lower animals may be selected. Dr. Hodder, of Canada, threw into the veins of some of his cholera patients fresh milk, and with excellent results. The writer has experimented with milk injections in the veins of dogs, and though the experiments have not been completed as to a test of the nourishing effects of the milk so given, no bad symptoms have become apparent. If it can be satisfactorily proved, that milk may be safely and generally used in transfusion, and with the desired result, a great advance will be made in the matter, it being nearly always obtainable, while many of the difficulties and inconveniences in the use of blood will be avoided. A saline solution (such as that of Mr. Little*) should be tried to save life, if nothing else is at hand.

The instruments for transfusion are, as is well known, quite numerous, and while many of them are very good, we believe that of Aveling, for immediate transfusion, to be probably the simplest, safest, and most easy of application. We have lately modified it by adding another bulb to the tube, and by having both tube and bulbs cast of the rubber into one piece. By the additional bulb we can save time in doing the operation, and can keep the blood moving along the tube almost continuously. In having the tube and bulbs in one, we do away with the metal portion which couples them in Aveling's apparatus, and we thereby diminish the risk of blood

---

* Mr. Little's solution is composed of chloride of sodium, 60 grs.; chloride of potassium, 6 grs.; phosphate of soda, 3 grs.; carbonate of soda, 20 grs.; water, 20 ounces

TRANSFUSION.

lodging and coagulating; while we can, if necessary, compress the whole apparatus more completely. As in Dr. Aveling's instrument, there are no valves. The inner wall of the whole apparatus is perfectly smooth, and we have had the opening from tube to bulbs made a gradual slope, thus altogether doing away with corners in which the blood might be arrested and form a clot.

The instrument of Aveling is intended for immediate transfusion. We have added a glass vessel which can be fitted to the tube, and the whole then used as a mediate transfuser if desired. The accompanying cut gives a good representation of the apparatus.

The manner of using the instrument is very similar to Aveling's. The canula marked *B* is placed in the giver's vein, that marked *C* in the vein of the receiver. The tube and bulbs having been filled with warm water, or better, with Mr. Little's saline solution (also warm), are now adjusted to the canulæ and the blood allowed to flow into the apparatus. The canula being steadied by an assistant, the tube is to be nipped tightly between the fingers, close to the giver's or efferent end, and then the bulb marked 1 is to be compressed, and the blood of course forced on towards the receiver. While this bulb is still held compressed, the tube at the giver's side is to be relaxed, and that portion of it between the bulbs is to be nipped; bulb 1 is relaxed, and No. 2 compressed and held; then the tube at the receiver's side is to be seized and held to prevent regurgitation, and the whole apparatus allowed to refill. The same operation to be repeated till sufficient blood is transfused. As suggested by Dr. Aveling, a few drops of ammonia solution may be injected into the bulbs now and then, by a fine-pointed hypodermic syringe, in order to more effectually prevent coagulation. It will be found that considerable force is necessary in sending blood or other fluids into the veins. This we discovered while doing transfusion twice in a case after hemorrage from gunshot injury, and we have also found it in our experiments on the lower animals. It is a fact that we have not seen noted in connection with transfusion, and one well worth remembering.

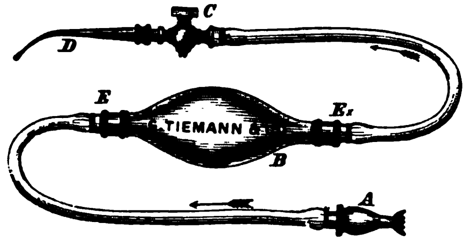
In order to use the apparatus as a mediate transfuser, the vessel marked *A* in the cut receives the blood, the tube is to be applied, and the instrument used as before directed. If the blood is not defibrinated and strained, three or four drops of ammonia solution to each ounce are added, in order to avoid coagulation.

The instrument is made by Messrs. GEORGE TIEMANN & Co., 67 Chatham Street, New York.

We would suggest to those who may become interested in transfusion, that though the operation is a simple one, it requires care, and it should first be practised once or twice on the lower animals; no difficulty will then be had in doing it on man when occasion requires.

FIG. 212.—Garrigue's Mediate Transfusion Apparatus.

Price....$4.00.



Draw eight or ten ounces of blood from a healthy person into a clean vessel, whilst it is accumulating whip it with a silver fork, a stick of wood or a bunch of straw, then strain it through a piece of cleanly washed linen into a vessel placed within another containing warm water (about 105 C.) Warm the syringe, put the suction end *A* into the blood, compress the bulb, and when it flows through the canula, turn the stopcock *C*.

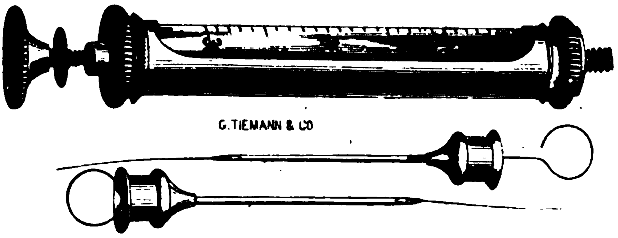
Having bared the patient's arm, raise a fold of skin over a vein at the bend of the elbow, divide it and pass a probe or thread under the vein thus brought into view. This is now held with a pair of forceps or tenaculum and an incision made with a lancet or pair of fine pointed scissors, carefully avoiding to wound its posterior wall. Now introduce the canula *D*, open the stopcock and inject slowly.

The bulb contains about three fluid drachms, but by moderate compression about two only are expelled. In most cases it suffices to inject from four to six ounces. If resistance, not due to external pressure be felt, or dyspnœa, or any other untoward symptom appear, the operation has to be interrupted or ended. Dress the wound as after phlebotomy.

After use, the instrument must be thoroughly cleansed, which is best done by separating all the parts and washing them in warm water.

HYPODERMIC MEDICATION.

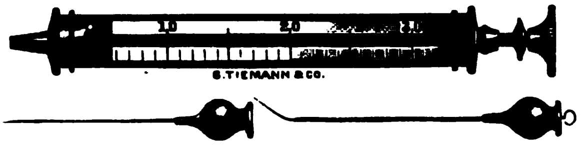
FIG. 213.—Hypodermic Syringe. No. 0.



Graduated Glass Barrel, with Fenestrated Metal Guard, 2 steel Needles attachable by Screw or Slide.

With Vial and Wires for cleaning the Needles, in a neat Morocco Case...............$3.00

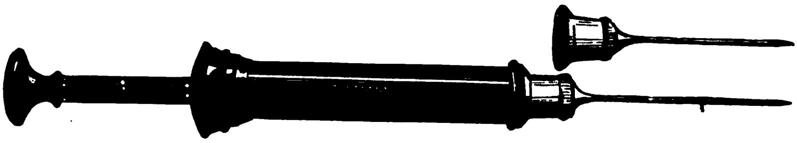
FIG. 214.—Hypodermic Syringe. No. 1.



Graduated Glass Barrel, with Bi-Fenestrated Metal Guard, 2 Needles attachable by Slide or Screw, made of tempered cast steel, nickel-plated, and much finer than those usually employed—an advantage in lessening pain on the introduction of the same.

With Vial and Wires, in a neat Morocco Case.......................................$4.00

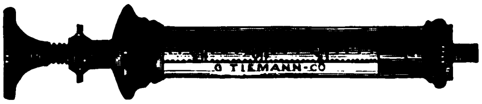
FIG. 215.—Hypodermic Syringe. No. 2.



Graduated Piston, Hard Rubber Barrel, 2 steel nickel-plated Needles attachable by Slide or Screw.

With Vial and Wires for cleaning the Needles, in a neat Morocco Case...............$3.00

FIG. 216.—Hypodermic Syringe. No. 3.



Graduated Piston, Glass Barrel, 2 fine steel nickel-plated Needles attachable by Screw or Slide.

With Vial and Wires for cleaning the Needles, in a neat Morocco Case...............$2.50

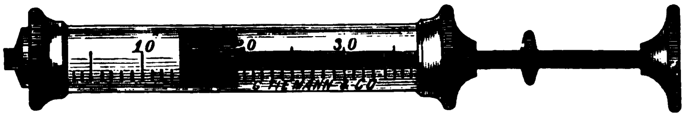
HYPODERMIC MEDICATION.

FIG. 217.—Hypodermic Syringe. No. 4.

Graduated Glass Barrel, smooth Piston Rod, 2 fine steel nickel-plated Needles attachable by Screw or Slide.

With Vial and Wires for cleaning the Needles, in a neat Morocco Case............... $2.50

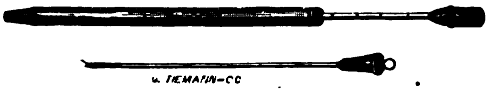
Hypodermic Syringe. No. 5.



Graduated Glass Barrel with Screw Piston, 2 fine steel nickel-plated Needles attachable by Screw or Slide.

With Vial and Wires for cleaning the Needles, in a neat Morocco Case.............. $3.00

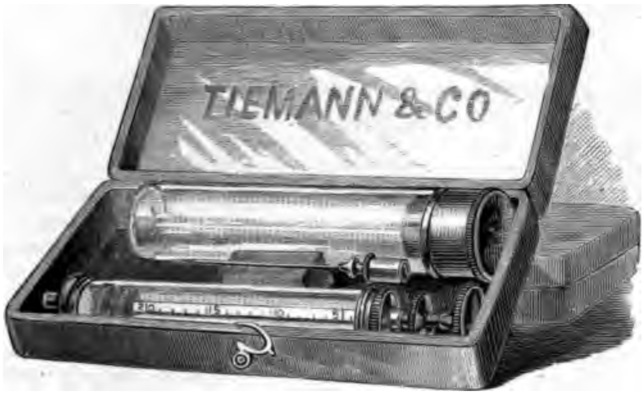
FIG. 218.—Stimson's Hypodermic Syringe. No. 6.



The accompanying cut represents a convenient form of hypodermic syringe, to be carried in the pocket-case. The point, inclosing the wire cleaner, fits into a hollow graduated piston. The barrel is an ordinary silver tube, the size of a No. 10 catheter, and is about three inches long.

Price.. $3.00

FIG. 219.—Vance's Hypodermic Syringe. No. 7.



Two Gold (14 carats) Needles, a small bottle with a glass stopper (retained by a metallic shield,) and a small wire.

In a neat Morocco Case.. $4.50

Morocco Hypodermic Syringe Cases..	each,	**$0.50**
Metal, nickel-plated Hypodermic Syringe Cases, to fit Nos. 1, 3, 4 and 5 Syringes,	"	**.75**

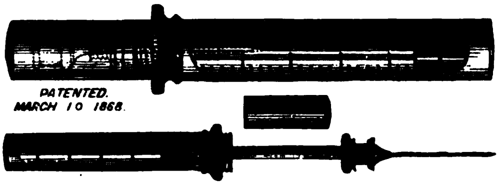
HYPODERMIC MEDICATION.

Greene's Hypodermic Case.

It contains four four-drachm vials, and five two-drachm vials, which each physician can fill to suit his fancy or requirements; a double fenestrated hypodermic syringe (No. 1, page 70), and three points or needles, all of the most improved pattern. They are of different sizes: one, the smallest and most delicate ever manufactured in the world, another, a size larger, and the third one of the ordinary size and make. Wires for keeping them clean and open, a small hone or stone of the finest quality for sharpening the points, a twenty-four minim glass measure perfectly exact, a Self-Registering Pocket Thermometer, very superior, contained in a neat vulcanized rubber case, and warranted perfectly correct. And last but not least, contains a thumb-lancet, also of the best manufacture.

Price of complete Case $12.00

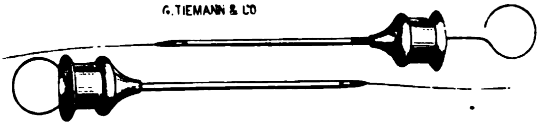
Fig. 220.—Geo. Tiemann & Co.'s Patent Hollow Piston Hypodermic Syringe, with a Gold Needle. No. 8.



The larger cut shows the instrument closed; the other one, the same syringe, barrel filled and needle mounted on the end of the piston (ready for use), and the cap, to cover the instrument. The barrel of this syringe is of glass, graduated, and is protected by a German silver or nickel-plated fenestrated case. It is very compact, and may be conveniently carried in the vest pocket. For this purpose the needle is unscrewed and put, point foremost, into the cavity of the piston; this is pushed home and the cap screwed on. In this way, it is perfectly protected from harm, and very portable.

Price $2.50

Fig. 221.—Extra Needles for Hypodermic Syringes.



Gold	$1.00
Steel	.50
Steel, gilt	.75
Steel, nickel-plated	.65

Needles made of Gold do not oxydize, but will not take a good edge nor keep it long. Steel Needles pierce best, but are apt to rust if not properly taken care of.

Steel Needles, gilt, are compartively rust-proof.

The *Steel nickel-plated* Needles answer as well as any others, and are even preferred by some.

In ordering extra Needles, please state which of the above you desire, and how the attachment to the syringe is to be effected—i. e., by *screw* or *slide?*

☞ If you desire Needles for syringes *not of our manufacture*, it is necessary to send your syringe to fit them.

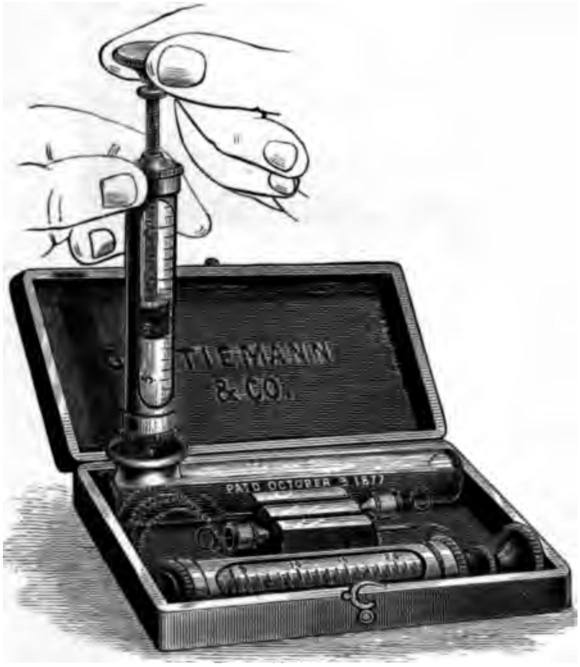
HYPODERMIC MEDICATION.

FIG. 222.—Geo. Tiemann & Co.'s Hypodermic Syringe Bottle.

Patented October 9th, 1877.

Great inconvenience is often experienced in filling a hypodermic syringe from the ordinary bottle, because of its narrow neck and its liability to upset.

The narrow neck prevents the insertion of the end of the syringe, or, if the syringe is screwed upon the bottle, a partial vacuum is liable to be formed, so that the piston returns when released and often some of the fluid re-enters the bottle. The liability to spill the contents of the bottle is increased by the fact that it has to be removed from the case and stood upright.



All these difficulties are overcome by the above improvement, the bottle having the mouth at a right angle to its body and made sufficiently large to admit the nozzle end of the syringe. It need not be removed from the case for the purpose of charging the syringe. You merely turn the neck upward, remove the stopper, insert the syringe into the fluid, and draw upon the piston until the desired quantity of medicine has entered the barrel. The case is made to hold the bottle tightly in any position, so that both may be left on the table during the operation, without fearing for the safety of the glass or its contents.

After having operated and replaced the needle and syringe in the case, the bottle is corked and turned back to its former position.

Price $0.25

When desired with Nos. 0, 1, 2, 3, 4, 5 Hypodermic Syringes, no extra charge is made.

REPAIRING HYPODERMIC SYRINGES.

If your glass cylinder is broken, and you want a new one, always send us your fittings.

If any other part of the syringe is wanted, send what you have left, and it will be easy to supply the missing portions.

☞ To prevent *confusion* and *loss*, parties sending parcels to us are requested to *enclose their card in* the same, as otherwise they cannot be identified.

HYPODERMIC MEDICATION.

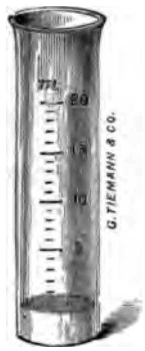


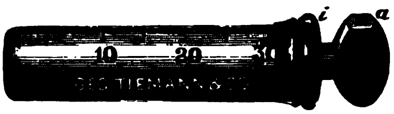
FIG. 223.—Pinkham's Graduated Measure.

For making solution, especially of morphia, at the time of using it, it is found most convenient to carry powders of the sulphate of morphia, containing half a grain of each. One of these is placed in the glass and twenty minims of warm water are thrown upon it from the syringe. If the powder remains undissolved, the contents of the glass can be taken in the syringe, and thrown back repeatedly until a perfect solution is obtained.

The glass is so graduated (see wood-cut) that any desired portion of its contents can be easily determined and taken up for use.

Price...$0.50

FIG. 224.—Tiemann & Co.'s Air-tight Hypodermic Bottle.



A small graduated glass bottle is so arranged that it is hermetically sealed by means of a hard rubber stopper. When you wish to fill the syringe the nozzle is placed in the side hole of the stopper, the glass is then turned up and rotated until it stops. Communication between the syringe and bottle is now open. Draw the piston back and the liquid follows, without any admixture of air. Turn the glass back again and the bottle is hermetically closed. To fill the bottle, turn the stopper half-way round, and there being a slot or indentation, it is easily pulled out. Bottles arranged for the sliding or for the screw syringes, as may be desired.

Price...$0.75

DIAGNOSTIC.

See Index for the following:

Endoscopes, Laryngoscopes, Otoscopes, Ophthalmoscopes, Probes, Sounds, Specula, Anal, Aural, Nasal, Oral, Ophthalmic, Uterine, Vaginal.

CLINICAL THERMOMETERS.

(Extracted from "Lessons in Physical Diagnosis," by ALFRED L. LOOMIS, M. D.)

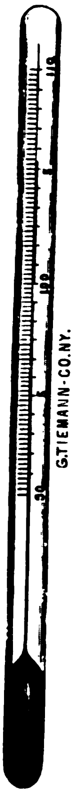
The *thermometer* is now regarded an indispensable mechanical aid in the diagnosis of disease.

I prefer, and would recommend to you, *the straight, self-registering, clinical thermometer*, represented in Fig. 225, No. 1.

This thermometer consists of a glass stem six inches in length, having on it a graduated scale varying from 85° to 115° Fahr., exhibiting .5° Fahr. The upper extremity of the stem is closed: at the lower end there is a bulb of mercury as thick as the diameter of the stem. Within the stem is a bit of mercury detached from the column of mercury in the bulb called ths index: this index is set by taking the bulb and stem of the instrument firmly in the hand, when, by repeated sudden blows of the wrist upon the knee, the index is brought down the stem to a point just below the lines which indicate the degrees. After the index has thus been set, the bulb of the instrument may be applied to the *axilla, between the thighs, in the mouth, rectum or vagina*, or to any *part* where it can be *completely covered*. Before introducing the bulb it is well to hold it in the closed hand until the mercury shows a temperature of 98°. Neglect of this precaution is apt to lead to an under statement of temperature. When the instrument has been in perfect contact with the parts for five or seven minutes, gently remove it, and the top of the index will denote the maximum temperature of the part.

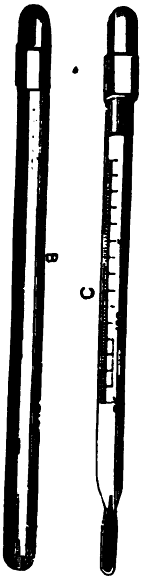
DIAGNOSTIC.

FIG. 225.—Clinical Thermometers.

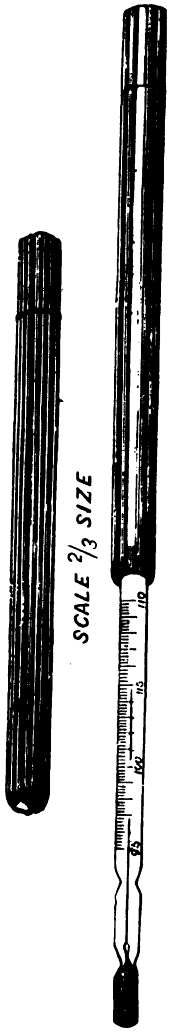


No. 1.—Plain Bulbs.
Hard Rubber Case..............Length, 4 in. $2.50
" " " ...." 5 " 3.00
" " " divided into fourths, " 6 " 3.50
" " " C. & F. " 4 " 4.50

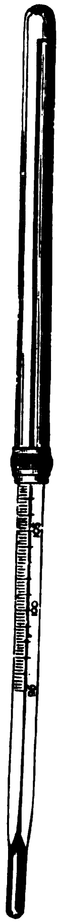
F. A. Stohlmann.



No. 2.—Silver Sliding Case........................$3.50
Silver Pencil Case........................5.00
German Silver Screw Case........................3.00



No. 3.—Hawksley's Constricted Bulb, divided into fourths.
Silver Screw Case.... $4.50
Hard Rubber Case... 3.00



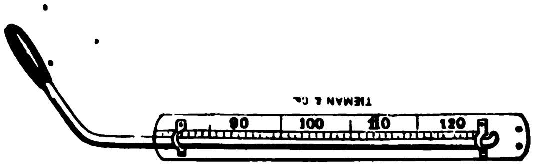
No. 4.—Dunster's Constricted Bulb, 3½ in. long, divided into half degrees.
Silver Case, in a bayonet fitting, $4.50

Edward Pfarre.

◆

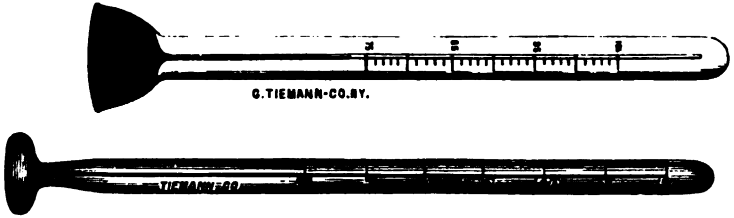
DIAGNOSTIC.

FIG. 225.—Clinical Thermometers.

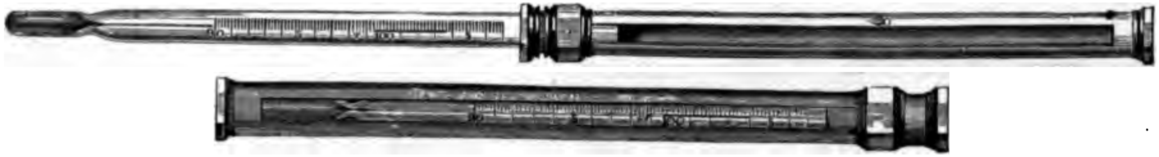


No. 5.—Casellas' Registering. Morocco Case, Ivory Scale, divided into fifths.

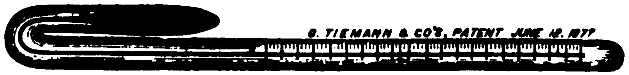
American manufacture	$3.00
English "	7.00 and upwards.



Nos. 6 and 7.—Seguin's case of 2 Surface and 1 Straight Self-registering Thermometers................$7.00



No. 8.—Pencil Case Thermometer. $5.50


G. TIEMANN & CO'S. PATENT JUNE 12. 1877

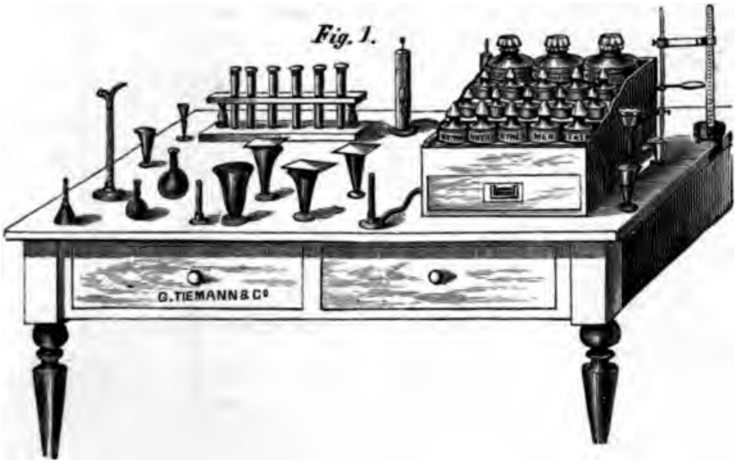
No. 9.—Geo. Tiemann & Co.'s Patent Bent Thermometer, in Case............$3.50

F. A. Stohlmann.

Edward Pfarre.

DIAGNOSTIC.

FIG. 226.—Apparatus for Urinary Examinations.



FLINT'S APPARATUS FOR URINARY EXAMINATIONS.

Black Walnut Case with rings, clamps, &c.	$25.00
12 Small and 3 larger labelled bottles	14.50
3 Small plain bottles, not labelled	.48

To hold the following REAGENTS, which we can furnish if desired, at :

2 oz. Nitric-acid	$0.25
2½oz. Hydrochloric-acid	.23
2 oz. Acetic-acid	.20
2 oz. Nitroso-nitric-acid	.20
2 oz. Nitrate of silver in solution (9.58 gr. in an ounce)	.50
2 oz. Sulphate of copper in solution (90.5 gr. in an ounce)	.35
2 oz. Neutral tartrate of potash in solution (364 gr. in an ounce)	.50
1 lb. Solution of soda (specific grav. 1.12).	.65
2 oz. Liquor potassæ	.20
2½oz. Liquor ammoniæ	.20
2 oz. Ether	.25
1 lb. Mercury (pure)	1.50
1 lb. Solution of hydrochlorite of soda	1.00
1 lb. Solution of chloride of sodium, (saturated)	.35
Litmus paper, red and blue Turmeric paper	.15
German yeast, in cake	.20

CONTENTS OF THE LARGE DRAWER.

1 Urinometer (Fig. 228)	$1.25
1 Thermometer	1.50
4 Porcelain evaporating dishes	1.50
2 Watch glasses, 2 inches diameter	$0.20
2 " " 3 " "	.50
2 " " 4 " "	.80
1 Alcohol lamp	.75
1 Burette graduated in grains	1.98
1 Plain blowpipe	.50

CONTENTS OF THE SMALL DRAWER.

3 Stirring rods	$0.45
3 Drop tubes	.15
2 Long swabs to clean out the Urea tube,	.50
2 Brushes	.44
1 Six ounce graduated glass	.75
1 One " " "	.50
1 One drachm " "	.50
4 Conical glasses with porcelain covers.	2.00
6 Test tubes and stand (a common article less)	3.38
3 Funnels and filtering paper	1.50
3 Flasks and wire gauze	1.50
1 Two hundred grain measure	.60
1 Tube graduated in cubic inches	2.00
1 Vessel in which the graduated tube can be inverted	.60
Amount for the Case and contents,	$70.45

DIAGNOSTIC.

APPARATUS FOR URINARY EXAMINATIONS.

FLINT'S EXTRA APPARATUS.

1	Hydrometer of Baumé for liquids heavier than water	$1.00
1	One thousand grain specific gravity bottle	3.00
1	Five hundred " " " "	2.75
1	One " " " " "	2.50
1	Water bath	2.50
1	Water oven for drying filters, brass	8.00
1	" " " " " tin	3.25
2	Wash bottles	2.00
1	Delicate balance to turn $\frac{1}{50}$ of a grain	11.00
1	Blowpipe, platinum point	3.00
1	Platinum spoon for calculi	4.00
12	Test tubes and stand	3.38
1	Book of colored papers, gummed, for recording the color of specimens	1.50
1	Bunsen burner and 6 feet rubber tubing	3.00
	Graduated solution of Chloride of Barium (36.6 grains in 6 fluid ounces of water) for quantitative analysis of the sulphates	.80
	Three separate solutions for quantitative analysis for Phosphoric-acid:	
1st.	Sesquichloride of iron ; 9.33 grains of iron by hydrogen dissolved in hydrochloric with a little nitric-acid ; evaporated to dryness, and dissolved in six fluid ounces of water, and bottle	.80
2d.	400 grains of acetate of soda and 800 grains of acetic-acid dissolved in six fluid ounces of water, and bottle	.50
3d.	12 grains of ferrocyanide of potassium dissolved in six fluid ounces of water, and bottle,	50

FIG. 227.
Graduated
Measure Glass.

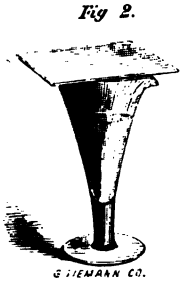


Fig 2.
G. TIEMANN CO.

FIG. 228.
Urinometer.

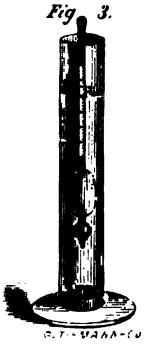


FIG. 229.—Fehlich's Flask,
Bunsen Burner and
Burette.

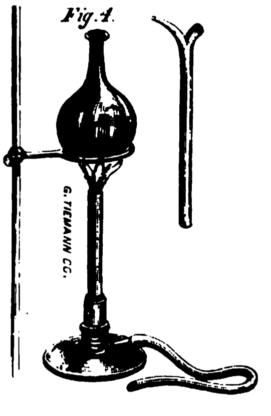


Fig. 4.
G. TIEMANN CO.

FIG. 230.
Urea Tube.

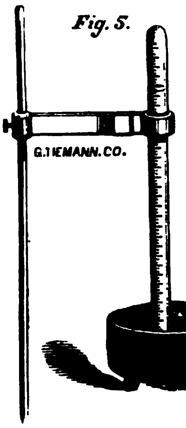


Fig. 5.
G. TIEMANN. CO.

Full directions for the use of this and other apparatus are given in Professor Flint's work, *Manual of Chemical Examination of the Urine in Disease*, by Austin Flint, Jr., M. D., Professor of Physiology and Microscopy in the Bellevue Hospital Medical College, &c., &c. Also in *A Guide to Urinary Analysis*, for the use of Physicians and Students, by Henry G. Piffard, A. M., M. D., Physician to the Charity Hospital, to the New York Dispensary for Diseases of the Skin, &c., &c. Also, in *Lessons in Physical Diagnosis*, by Alfred M. Loomis, M. D., Professor of the Institutes and Practice of Medicine in the Medical Department of the University of New York, Physician to Bellevue and Charity Hospitals, &c., &c.

DIAGNOSTIC.

APPARATUS FOR URINARY EXAMINATIONS.

Fig. 231.
a. Retort Stand ; *e*. Bunsen burner ;
b. Water bath, and *c.d.* Piffard's Water oven.

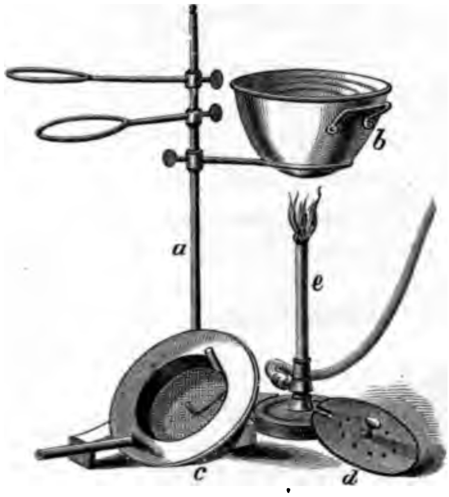


FIG. 232.
a. Piffard's Measuring Pipette:
b. Arrangement for Fermentation Test.

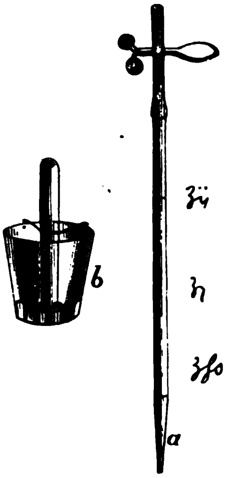


FIG. 233.
Graduated Tube for Approximate Analysis.

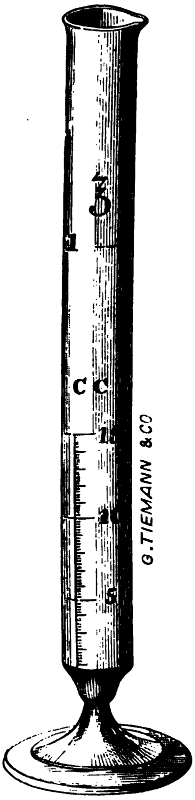


FIG. 234.
a. Mohr's Burette ; *b*. Stand ; *c*. Beaker.

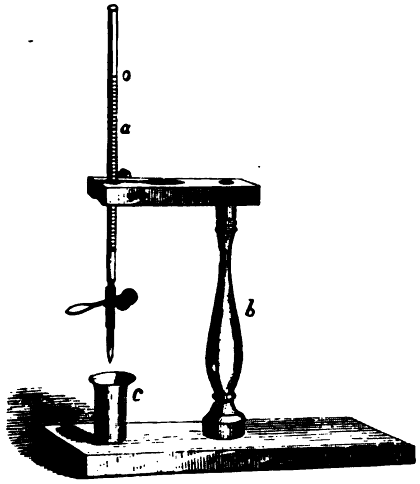
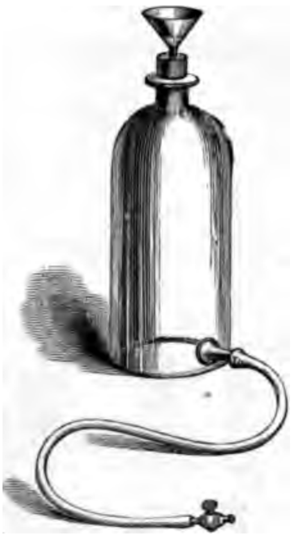


FIG. 235.
Rapid Filtration Apparatus.



PIFFARD'S APPARATUS FOR URINARY EXAMINATIONS.

12 Test tubes and stand	$2.00
Spirit lamp	.75
Bunsen burner	1.50
" " improved	2.00
Funnels	each, .25 to .50
Burette, Mohr's, 200 grains	2.00
" " 200 " glass stop-cock	3.00
" Bink's 250 "	1.87
" stand	2.00
2 oz. Beakers	each, .10
Griffin's beakers, with lips, 6	2.00
Water bath	2.60
Water oven attachment	1.50
Retort stand	1.50
Rapid filtering apparatus	5.00

Measuring flask, 3000 grains	$1.50
Flasks	each, .15 to 25
Urinometer	1.00
Specific gravity bottle, 1000 grains	2.00
Graduates, 2 oz.	each, .50
" 6 oz.	" .75
Graduated tubes for approximate analysis	1.50
Urea tube	2.00
Filters, German and Swedish, assorted	.75
Litmus paper, blue and red	.25
Measuring pipettes	.50
Balance (Becker's), turning $\frac{1}{50}$ grain	11.00
Same in glass case	22.00
Weights (accurate), 10 grains to $\frac{1}{50}$ grain	1.75
" best, 1000 grains to $\frac{1}{100}$ grain	10.00

F. A. Stohlmann. **Edward Pfarre.**

DIAGNOSTIC.

APPARATUS FOR URINARY EXAMINATIONS.

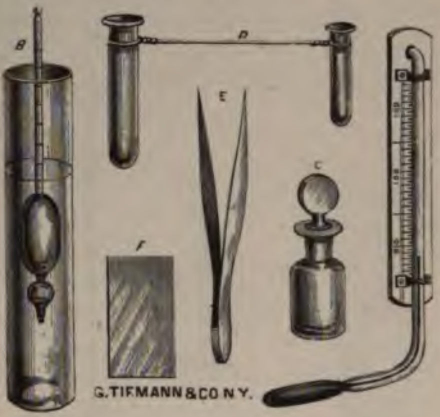


FIG. 236.—Vance's Urine Test Case.

CONTENTS :

- 2 Test tubes and holder.
- 1 Acid bottle.
- 1 Axilla thermometer.
- 1 Pair brass forceps.
- Red and blue litmus paper.

In a neat Morocco Case.................. $6.00

Ormiston's Urine Test Case.

A small brass lamp furnace for heating water bath, test tubes, &c.

A small gravimeter for taking specific gravities.

A thermometer for ascertaining the temperature of urine when its specific gravity is taken.

A conical glass for collecting deposits from urine.

A pipette with bulb and rubber ball for removing supernatant fluid from deposits.

A Berlin porcelain crucible.

Berlin evaporating dishes, to be used as a water-bath with the furnace, and for other purposes.

Watch glasses and test tubes.

A test tube rack. Test papers.

A small balance.

A triangular wire for supporting watch glasses or Berlin capsules for evaporating or drying.

Price................................ $17.00

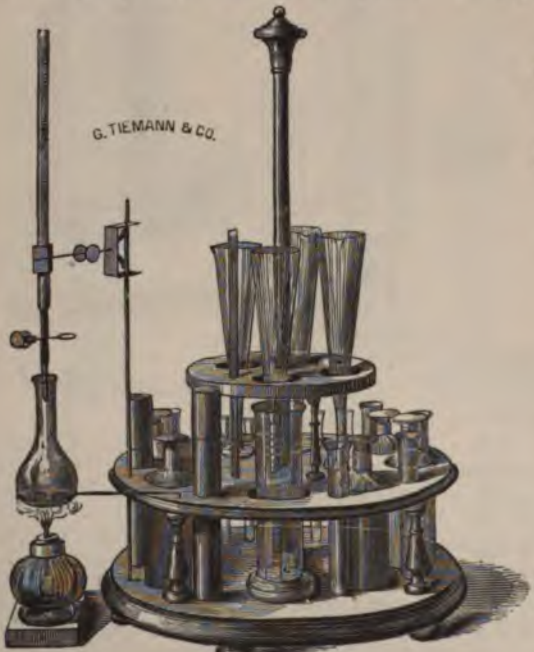

G.TIEMANN & CO.

FIG. 237.—Roberts' Urine Test Apparatus (improved by Lewis).

Consists of the following parts :

- 1 Set Neubaur's urinometers with two test glasses.
- 4 Urine glasses.
- 6 Test tubes.
- 1 Alcohol lamp.
- 5 Bottles with pure reagents.
- 1 Burette with holder.
- 3 Pipettes and 3 stirring rods.
- 1 Graduate.
- 1 Flask with ring support for same.

The whole on a revolving etagere of black walnut, &c., with printed description........................... $25.00

DIAGNOSTIC (for Mediate Auscultation).

FIG. 238.—Flexible Stethoscope.

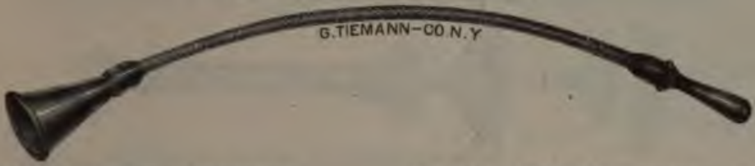


FIG. 239.—Hawksley's Stethoscope.

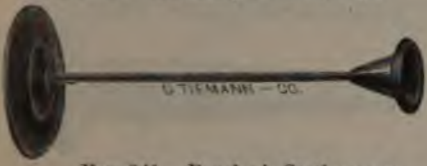

G.TIEMANN — CO.

FIG. 240.—Walsh's Stethoscope. (Dogwood.)

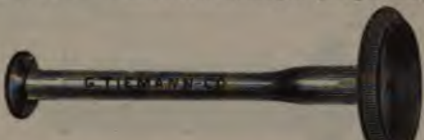


FIG. 241.—Barclay's Stethoscope.

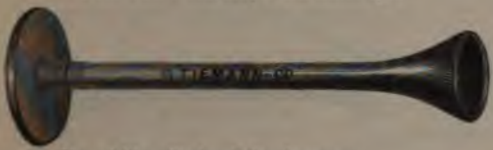


FIG. 242.—Elliottson's Stethoscope.
Ivory Ear Piece and Pleximeter.

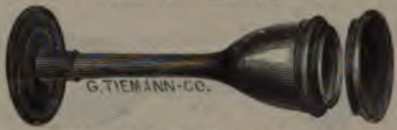

G.TIEMANN-CO.

FIG. 243.—Stokes' Stethoscope.

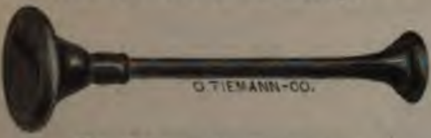

G.TIEMANN-CO.

FIG. 244.—Dobell's Ebony Stethoscope.

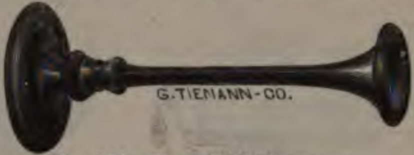

G.TIEMANN-CO.

FIG. 245.—Cedar Stethoscope.
Hard rubber Ear Piece.

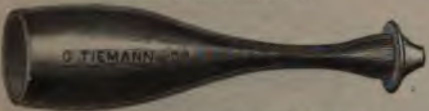


FIG. 246.—Loomis' Stethoscope.
With rubber ring used as Pleximeter.

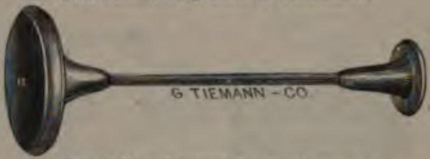


FIG. 247.—Cedar, Ivory Mounted Stethoscope.

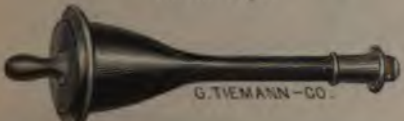

G.TIEMANN-CO.

FIG. 248.—Burrow's Stethoscope.
Vulcanite Ear Piece.

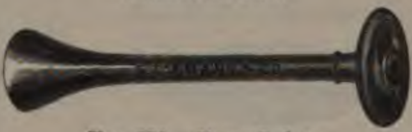


FIG. 249.—Quain's Telescopic Stethoscope.

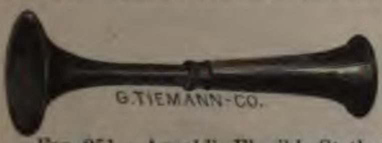

G.TIEMANN-CO.

FIG. 250.—Short Cedar Stethoscope.

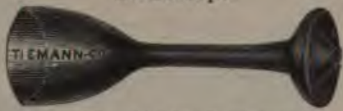


FIG. 251.—Arnold's Flexible Stethoscope.

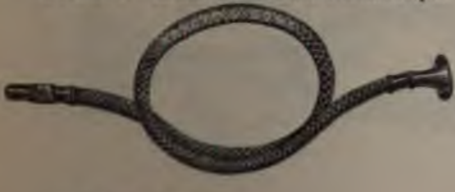
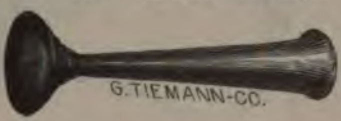


FIG. 252.—Clark's Stethoscope.


G.TIEMANN-CO.

DIAGNOSTIC (for Mediate Auscultation and Percussion).

FIG. 253.—Martin's Combination Stethoscope, Percussor and Pleximeter.

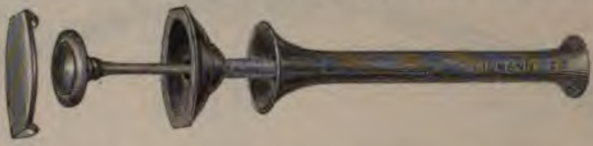


FIG. 254.—Cammann's Cylindrical Auscultator.
Solid Cedar.

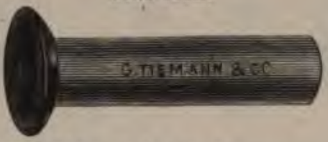


FIG. 255.—Cammann's Intra-Costal Auscultator.

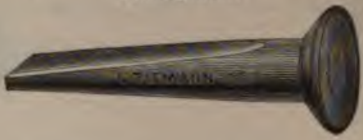


FIG. 256.—Cedar Stethoscope.
Vulcanite Ear Piece.

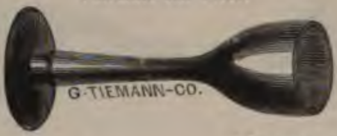

G·TIEMANN-CO.

FIG. 257.—Ferguson's Stethoscope

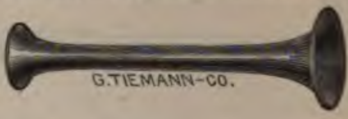

G.TIEMANN-CO.

FIG. 259.—Rubber Pleximeter.

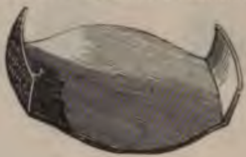


FIG. 258.—Glass Pleximeter.

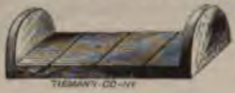


FIG. 260.—Percussor with Whale bone Stem.

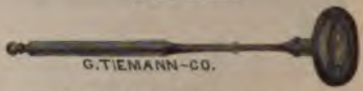

G.TIEMANN-CO.

FIG. 261.—Gerne's Pleximeter.

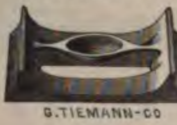


FIG. 262.—Ivory Pleximeter.

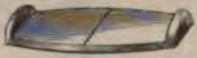


FIG. 263.—Winterich's Percussion Hammer.

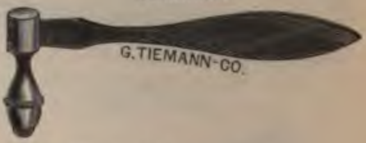

G.TIEMANN-CO.

FIG. 264.—Flint's Pleximeter.

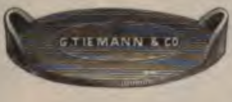


FIG. 265.—Flint's Percussor.

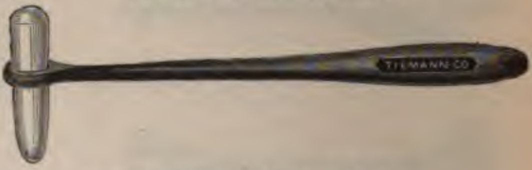
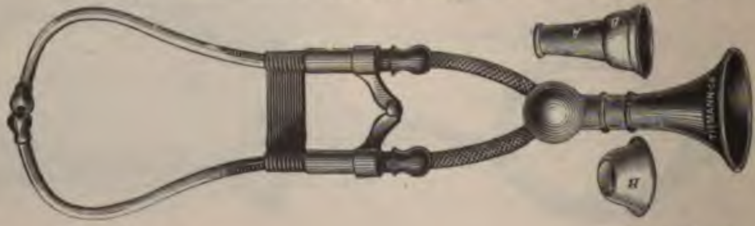


FIG. 266.—Cammann's Stethoscope with Snelling's Rubber Bell.



F. A. Stohlmann. **Edward Pfarre.**

DIAGNOSTIC (for Mediate Auscultation and Percussion).

FIG. 267.—Speir's Echoscope (to intensify sounds produced by percussion).

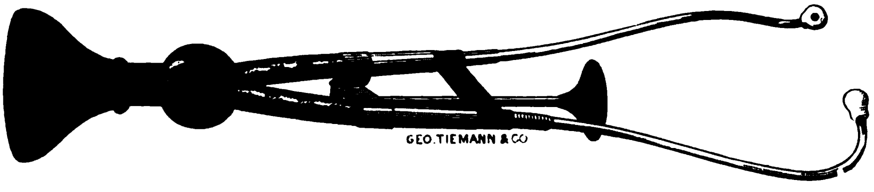


FIG. 268.—Allison's Differential Stethoscope.

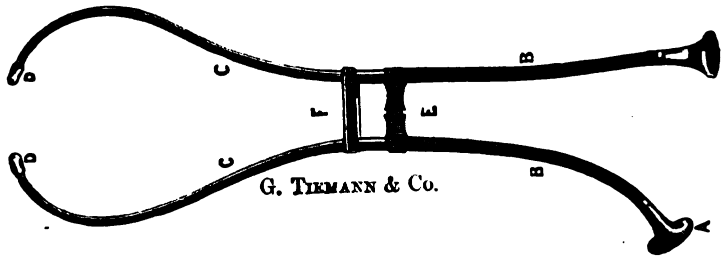


FIG. 269.—Knight's Stethoscope.

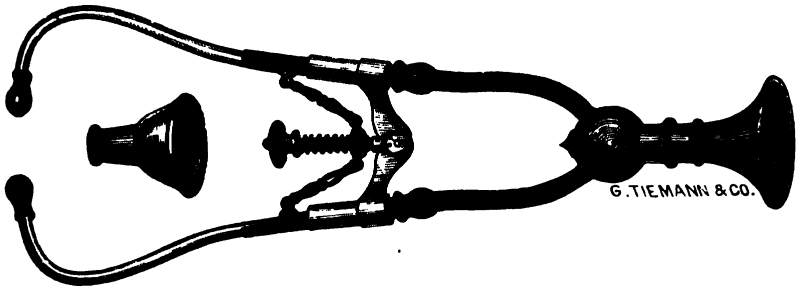
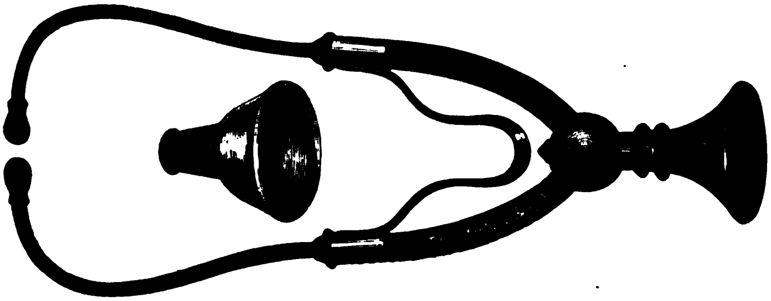
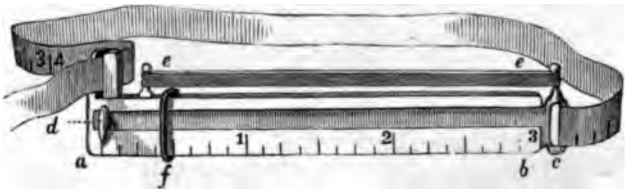

G. TIEMANN & CO.

FIG. 270.—Davis' Stethoscope.



DIAGNOSTIC.

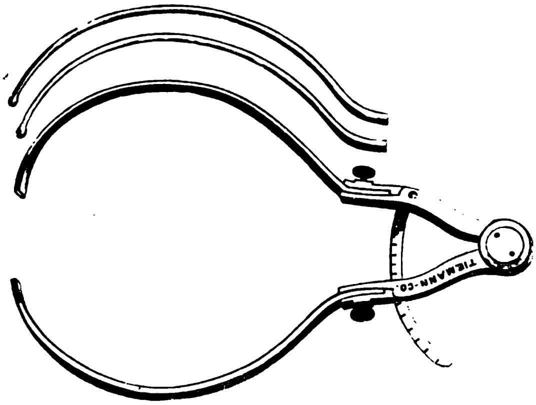
FIG. 271.—Carroll's Stethometer.



(*Extract from New York Medical Journal, February, 1868.*)

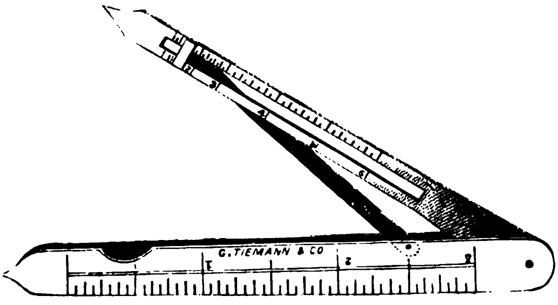
It consists of an outer case, marked with a scale of three inches, *a b*, within which moves a slide, *c d*, bearing a gnomon or indicator, *d*. To the end of this slide is attached an ordinary measuring tape, the first three inches being cut off, so as to render the scale continuous, which is passed around the chest and drawn through the catch at the opposite end of the instrument. As the lungs are inflated, the slide is drawn out and the indicator shows the exact amount of expansion. A hard rubber ring, *f*, sliding easily over the scale, may be used to render the stethometer self-registering; and Messrs. TIEMANN & Co. have added also an elastic band, *e e*, to draw the two portions of the instrument together. This elastic band, if used at all, must be very slight, as I have found that even the thin envelope rings prevent the full expansion of the chest. I therefore remove the band before applying the stethometer, which thus registers itself without the hard rubber slides.

FIG. 272.—Flint's Cyrtometer.



Compass with short arms, holding strips of lead long enough to encircle the chest. An indicator may be set at any point by a thumb-screw. The strips of lead are easily moulded so as to fit any depression or elevation of the chest; the thumb-screw is then loosened and the instrument removed; after removal the arms of the compass are brought together at the same point of the indicator as when applied, fastened, and when placed on paper, the exact shape of the chest can be traced by a pencil.

FIG. 273.—Cammann's Cardiometer.

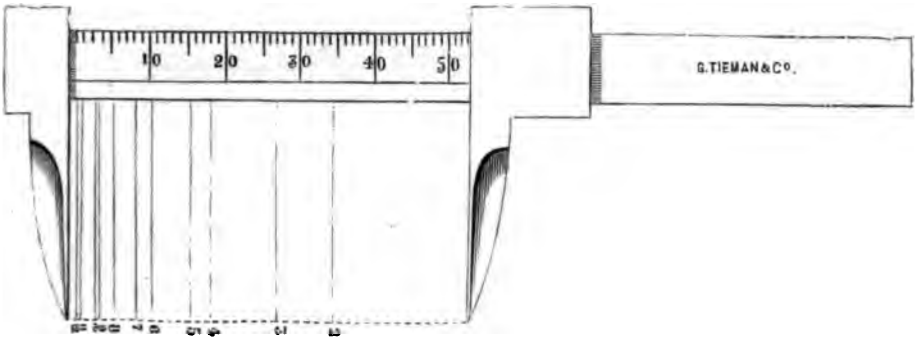


To determine the distance of the apex beat from the median line, one point is placed on the median line and that of the other bar to a point corresponding to the apex beat; by reading the figure marked by the indicator, you determine the number of inches the apex beat is distant from the median line.

The instrument is very small, and when closed presents rounded ends, and may be conveniently carried in the pocket.

DIAGNOSTIC.

FIG. 274.—Sieveking's Æsthesiometer.



It is of the greatest moment that in any patient suspected of having brain disease, the condition of the tactile sensibility be investigated, and any alteration from the natural standard carefully noted. This necessity has led to the invention of instruments for the determination of the cutaneous sensibility.

The earliest attempt in this direction was made by Dr. Sieveking, of London, who, in 1878, described an instrument for this purpose which he called an æsthesiometer. This was simply a modification of the common beam-compass employed by carpenters, and is yet in common use among physicians interested in the pathology of the cerebro-spinal organs.

The class of cases in which it is useful were thus enumerated by Dr. Sieveking:

1. "In actual paralysis, to determine the amount and extent of sensational impairment.

2. "As a means of diagnosis between actual paralysis of sensation and mere subjective anæsthesia, in which the tactile powers are unaltered.

3. "As a means of determining the progress of a given case of paralysis for better or for worse."

The diagnostic value of an instrument of this nature in cases where sensibility is affected, depends upon the fact that the capability of distinguishing two impressions made simultaneously varies in different regions of the body, according to the distance they are apart.

"For instance, the two points of a pair of compasses can be distinguished at about the sixth of an inch apart when applied to the end of the finger, while on the back of the hand only one point is felt, though they are an inch apart."

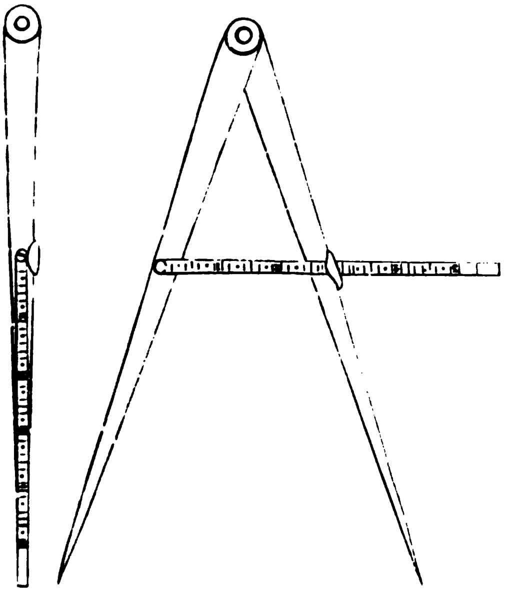


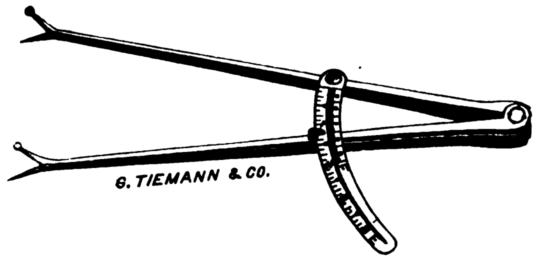
FIG. 275.—Hammond's Æsthesiometer.

For the purpose of noting the phenomenon as presented by patients suffering from brain diseases, it is essential to have an æsthesiometer of a compact form and small size—but one that can be conveniently carried in the pocket of the physician. This want has led to the construction of a number of instruments, many of which possess peculiar merit.

Beard's Piesmeter, for measuring the sense of pressure, see Index.

DIAGNOSTIC.

FIG. 276.—Carroll's Æsthesiometer.

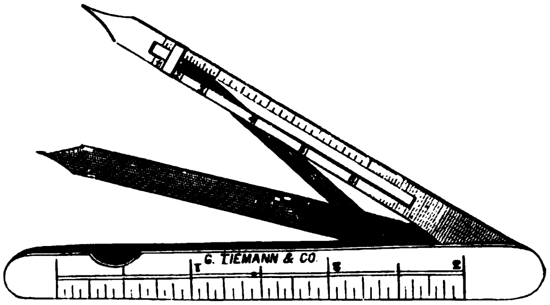


(From the Medical Record.)

Dr. Alfred L. Carroll described and illustrated an instrument constructed on the general plan of the two-legged compass, but with each free extremity divided into two points, one blunt and the other sharp. This arrangement enables the observer to determine the comparative sensibility to contact and pain at different distances by simply substituting the one pair of points for the other.

FIG. 277.—Vance's Pocket Æsthesiometer.

When closed, the points are in coaptation, and are received in the case the same as the blades of a knife shut into its handle. When opened and the points separated, the distance between the points is denoted by the position of the slide, which is so arranged as to move over a scale engraved on one arm of the æsthesiometer. The scale is divided into inches and twelfths of an inch. The points can be separated to the extent of six inches. When closed, the instrument is four and one-fourth inches in length. An instrument which, like this one, can be carried in the pocket habitually, will enable a physician to make observations which would otherwise be impossible. For instance, certain remedies have an important influence upon the cutaneous sensibility—some depressing, others exalting it. A little careful observation would furnish very valuable information upon these points, and might extend knowledge of the mode of action of such remedies in a very important manner.



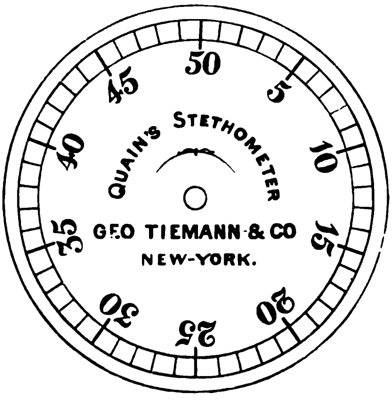


Fig. 278.—Quain's Stethometer.

This instrument is for determining the exact amount of difference in the expansion of the two sides of the chest, as well as for determining the amount of local expansion in any region.

"Physical Diagnosis," Loomis, p. 205.

DIAGNOSTIC.

SPHYGMOGRAPHS.

Instruments to ascertain and record the quickness, strength, uniformity or irregularity of the pulse, also used for purposes of diagnosis and various physiological investigations.

FIG. 279.—Marey's Sphygmograph.

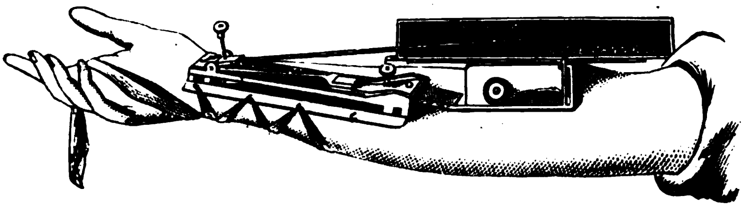
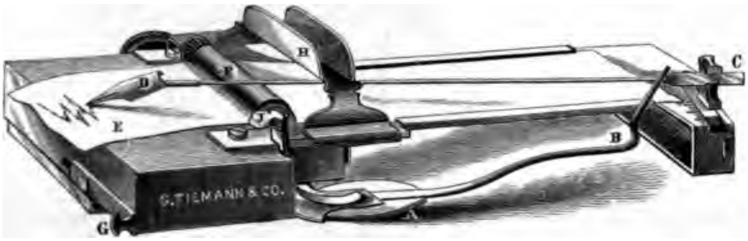


FIG. 280.—Holden's Sphygmograph.



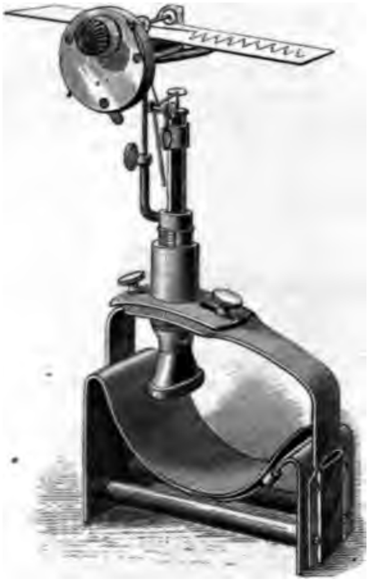


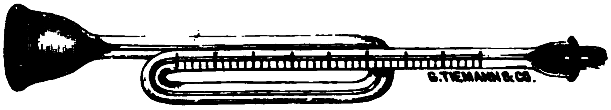
FIG. 281.—Pond's Sphymograph.

It consists of an upper and lower section, the lower one containing fluid and having a rubber diaphragm stretched over its end, is, in use, the part applied to the pulse. The upper and smaller tube fits the larger and lower tube by means of a packing on its inferior end, thus moving freely in and out, and determining at desire the height of the fluid in the small part of the tube.

Inside the small part of the tube is a free float, made of glass, which obeys any movement of the fluid or any vibration from the rubber cap on the lower end of the instrument. A pendulous needle clasps on the upper part of the tube. A watch movement is attached to move the slide on which the trace is to be made. It is fastened to the wrist by means of a holder.

DIAGNOSTIC.

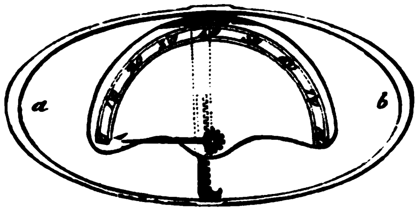
FIG. 282.—White's Hæmarheumoscope.



In order to prepare the hæmarheumoscope for an observation, a fraction of a drop of filtered solution of rose aniline in alcohol, with some essential spirit, must be introduced. The essential spirit is thus employed in combination with a view to its quality to diminish friction within the bore of the tube.

When this instrument is made to rest firmly and steadily upon the trunk of a superficial vein of sufficient dimensions, the peculiar movement of the stream of blood beneath the bowl of the instrument sets the sensitive fluid column within the tube into sympathetic motion, clearly demonstrating that the blood within the vein receives the shock and experiences augmentation of contents nearly isochronous with the arterial throb.

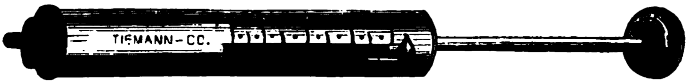
FIG. 283.—Dynamometer.



When taken into the hand and pressed, the two sides of the spring are approximated, and the steel arm, with the cogs being pushed by the lower side of the spring, turns the indicator. One great advantage of this instrument is, that when the pressure is taken off, the indicator does not return to zero, but remains at the point to which it has been carried by the muscular power of the individual.

Clinically, you are able to measure accurately the strength of paralyzed muscles of the upper extremities, to determine the slightest difference in muscular power of the two hands, as well as any changes that may occur from time to time in the course of coxa of paralysis.—"Physical Diagnosis, Loomis."

FIG. 284.—Beard's Piesmeter.



This instrument is for the purpose of measuring the sense of pressure. It consists of a spring in a German silver tube. The spring is pressed by a rod, on the end of which is a hard rubber disc one-third of an inch in diameter; on the tube is a graduated scale.

The sense of pressure is strongest on the forehead, tongue, and cheek; next in order come the fingers, back of hand, forearm, and arm; then the anterior portion of the thigh and leg, back of foot, and toes. The least sensitive portions are the back of thigh and leg.

On comparison, the relative sensitiveness of different parts of the body to farradization, with the relative acuteness of the sense of pressure exhibits a remarkable coincidence.

DIAGNOSTIC.

FIG. 285.—A. McLane Hamilton's Dynamometer.

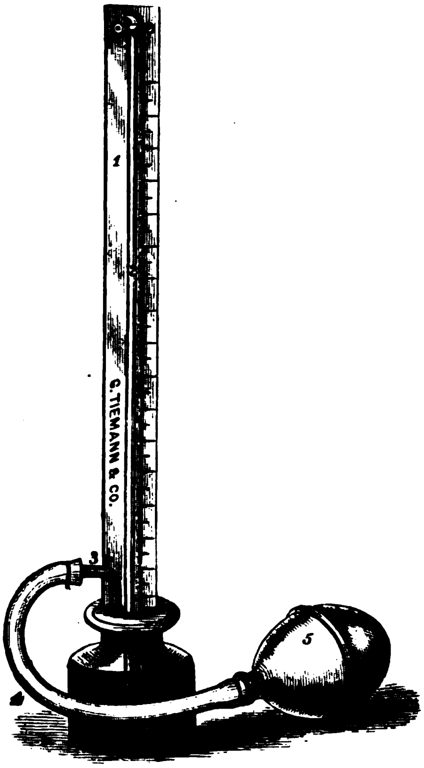
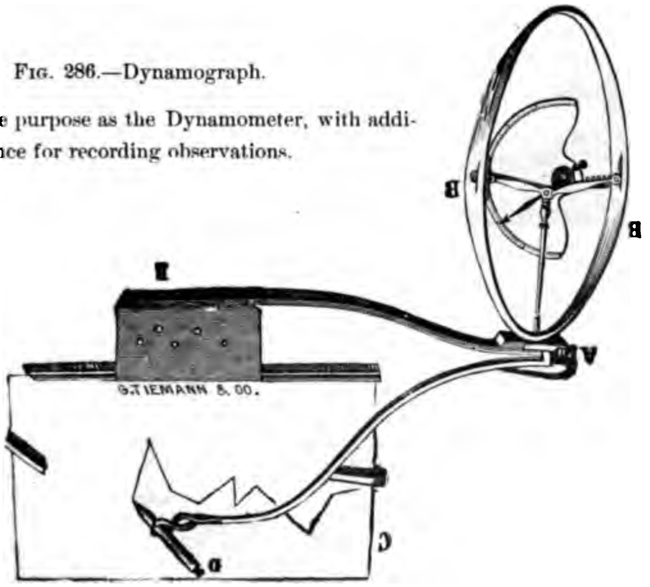


FIG. 286.—Dynamograph.

For the same purpose as the Dynamometer, with additional contrivance for recording observations.



DIAGNOSTIC.

FIG. 287.—Microscope.

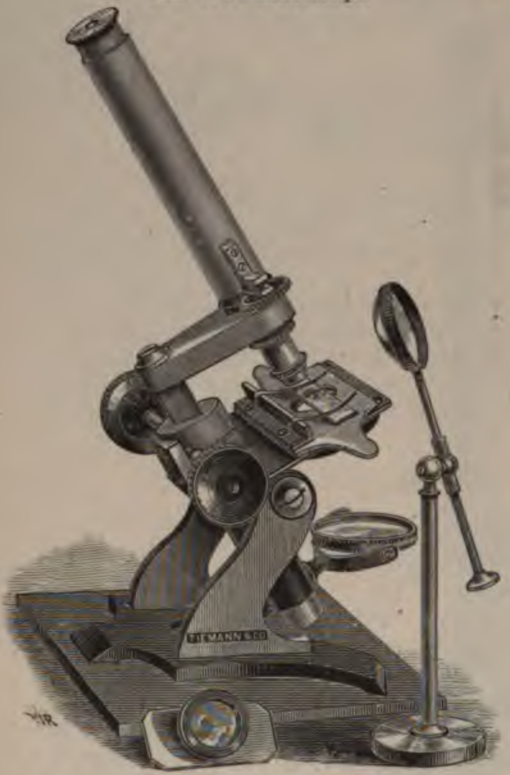
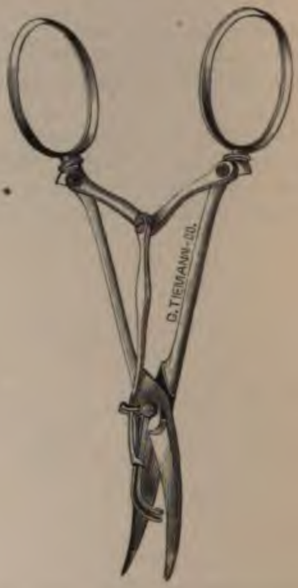


FIG. 291.—Transplantation Scissors.

For obtaining minute sections of fresh tissue for transplantation or for examination.


G. TIEMANN-CO.

AIDS TO MICROSCOPICAL EXAMINATIONS.

FIG. 288.—Duchenne's Exploring Trocar.

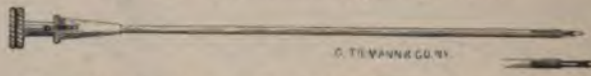
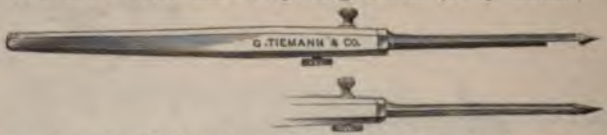


FIG. 288*b*.—Duchenne's Exploring Trocar (Ivory Handle).


G. TIEMANN & CO.

These Trocars are introduced into the muscle open. When in *situ* a piece of sharp steel is pushed, by means of the button, against the barb of the Trocar. A piece of muscle is thus caught, which, on the withdrawal of the Trocar, can be examined.

FIG. 289.—Exploring Trocar.

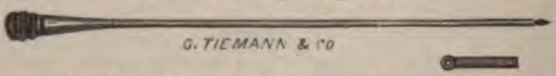
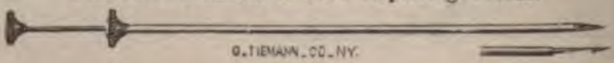


FIG. 290.—Tiemann & Co.'s Exploring Trocar.


G. TIEMANN. CO. NY.

DIAGNOSTIC.

AIDS TO MICROSCOPICAL EXAMINATIONS.

FIG. 292.—Noeggerath's Exploring Trocar.

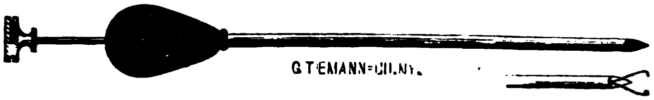
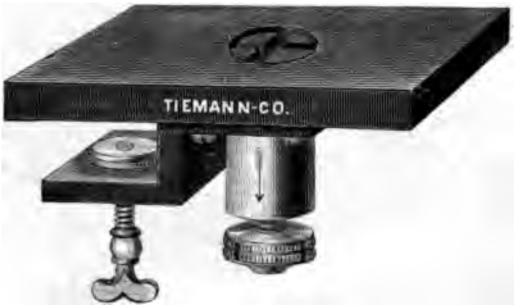


FIG. 293.—Jewett's Improved Section Cutter.



It is a modification of the well-known apparatus of Dr. Edward Curtis. The brass and glass plates of Dr. Curtis' holder are replaced by a single slab of vulcanite. By means of the screw a tight-fitting shaft of vulcanite is moved upwards through the cylindrical barrel. The screw is cut fifty threads to the inch, and the circumference of the milled head graduated for measuring the thickness of sections.

The holder may be secured to a table by means of the clamp. The tissue to be cut, previously hardened, is imbedded, in the usual manner, in a paraffine cylinder, cast upon the end of the vulcanite shaft. The paraffine is held firmly to the shaft by two dovetailed slots cut at right angles to each other in the end of the shaft. The knife may be used with or without the knife-frame of Dr. C. With the frame large sections of extreme thinness may be cut with facility.

FIG. 294.—Curtis' Section Knife and Frame.

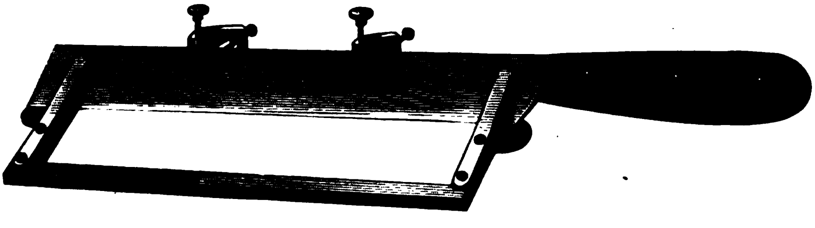
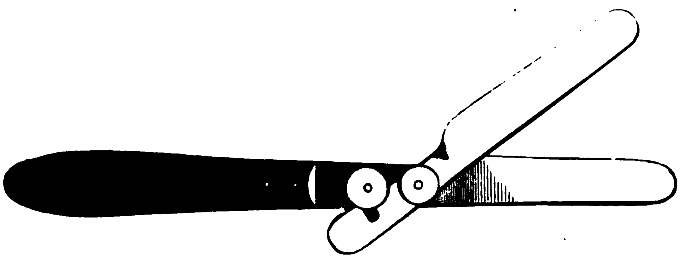


FIG. 295.—Valentine's Section Knife (Tiemann's Model).

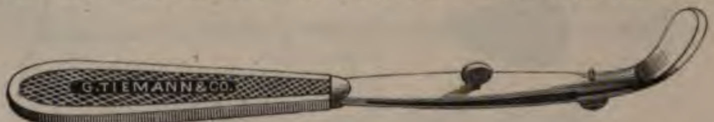


DIAGNOSTIC.

AIDS TO MICROSCOPICAL EXAMINATIONS.

FIG. 296.—Piffard's Cutisector.

For obtaining thin sections of morbid integument for microscopical examination.


G.TIEMANN&CO.

It consists of two parallel blades, which may be approximated by means of screws. The knife being held as a pen, a perpendicular incision may be made through the whole thickness of the skin, and the knife withdrawn, leaving attached a thin slice of tissue, which can be easily removed with a pair of fine forceps and placed under the microscope.

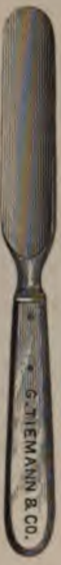

G.TIEMANN & CO.

FIG. 297.—Microscopic Section Knife.

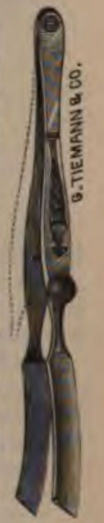

G.TIEMANN & CO.

FIG. 298.—Valentine's Knife (Charriére's Model).

FIG. 299.—Microscopic Section Razor.

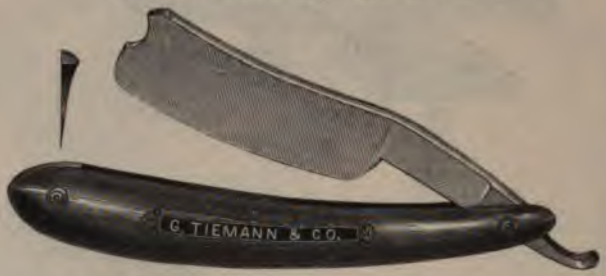

G. TIEMANN & CO.

FIG. 300.—Microscopic Pocket Scalpel.

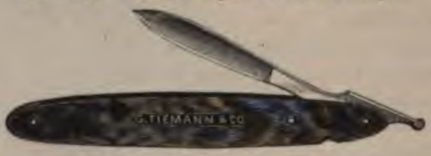


FIG. 301.—Microscopic Scalpel.

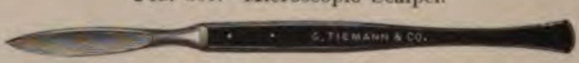

G. TIEMANN & CO.

FIG. 302.—Probe-Pointed Microscopic Bistoury.

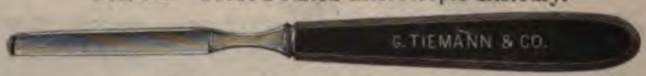

G. TIEMANN & CO.

FIG. 303.—Sharp-Pointed Microscopic Bistoury.

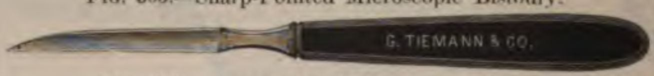

G. TIEMANN & CO.

FIG. 304.—Spear-Pointed Microscopic Knife.

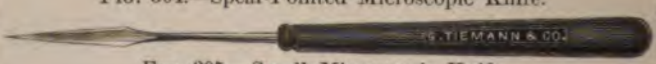

G. TIEMANN & CO.

FIG. 305.—Small Microscopic Knife.

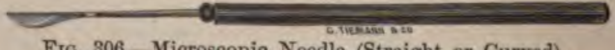


FIG. 306.—Microscopic Needle (Straight or Curved).

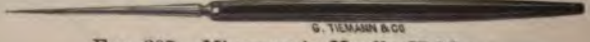
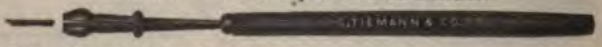


FIG. 307.—Microscopic Needle Holder.


G.TIEMANN & CO.

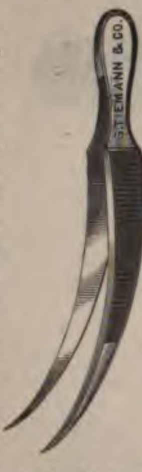

G.TIEMANN & CO.

FIG. 308.—Curved Microscopic Forceps.

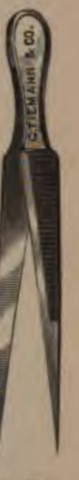

G.TIEMANN & CO.

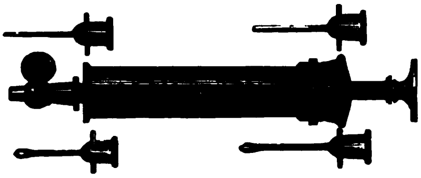
FIG. 309.—Straight Microscopic Forceps.

To obtain *fluid* contained in a distended pleural, pericardial or abdominal cavity, &c., for examination, the Aspirators are useful.

DIAGNOSTIC.

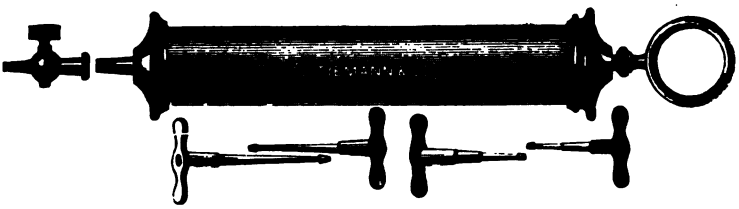
AIDS TO MICROSCOPICAL EXAMINATIONS.

FIG. 810.—Hard Rubber Microscopic Syringe, No. 0.



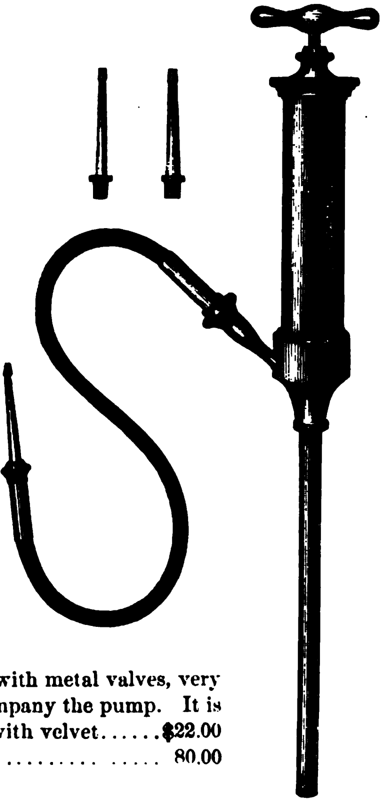
"Microscopic Scissors," see Figs. 110, 111, Part II.

FIG. 811.—Brass Microscopic Syringe, No. 1.



POST MORTEM.

FIG. 312.—Embalming Pump.



The art of embalming originated in Egypt over 3000 years ago. The invention was ascribed by the Egyptians to Anubis the son of Osiris, who is said to have performed the office for his father. In recent times, considerable attention has been devoted to the subject and various processes and compounds have been devised.

Gaural injected the veins with sulphate of alumina. Falconi injected into the body sulphate of zinc. Chloride of zinc and sulphate of soda are also sometimes used.

For temporary preservation of bodies for anatomical investigations the following requisites are necessary. The body should remain in a soft and flexible condition for a period of at least three months, the tissues should not change color, the *material* should not be injurious to the health of the operator, nor spoil the instruments used in the operation, and it must be either free from or have an agreeable odor, and be cheap.

Dr. Wywodzoff, of St. Petersburg, Russia, recommends thymol diluted with water and glycerine.

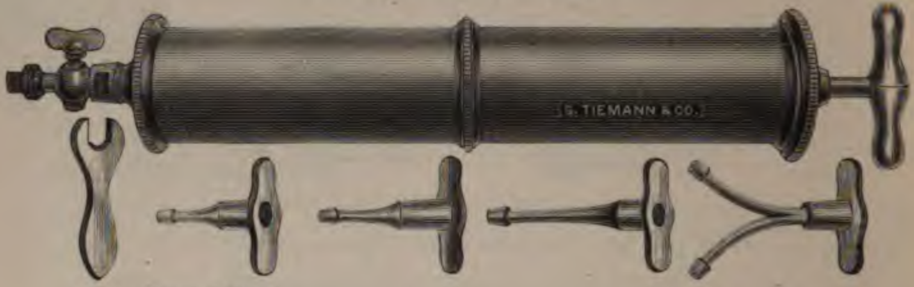
℞. Thymolis, . . . sc. ij.
Glycerine, . . . lbs. iv.
Aq., ... lbs. ij.

The Embalming Pump (fig. 312) is made of brass, with metal valves, very accurately fitted. Three points of assorted sizes accompany the pump. It is nickel-plated and put up in a black walnut case, lined with velvet......$22.00

Dr. Wywodzoff's Embalming Apparatus 80.00

POST MORTEM AND DISSECTING.

FIG. 313.—Anatomical Syringe.


G. TIEMANN & CO.

Brass Syringe.
1 Double injection Pipe.
3 Different sizes single Pipes.
1 Stopcock.
1 Key Wrench to fasten and detach the stop-cock.
1 Mahogany Case lined with velvet.................. $40.00

FIG. 314.—Steel-Handle Cartilage Knife.

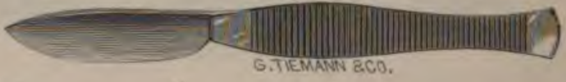

G. TIEMANN & CO.

Fig. 316.—Dissecting Double Hook.

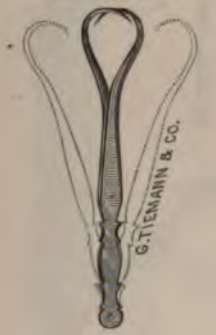

G. TIEMANN & CO.

FIG. 315.—Dissecting Hook (Steel Handle).

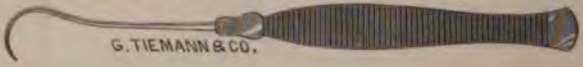

G. TIEMANN & CO.

FIG. 317.—Darling's Chain Hook.

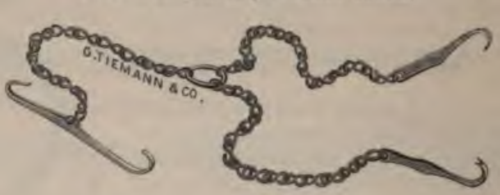

G. TIEMANN & CO.

FIG. 318.—Grappling Hook.

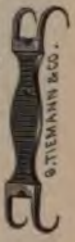

G. TIEMANN & CO.

FIG. 319.—Chain Hook.

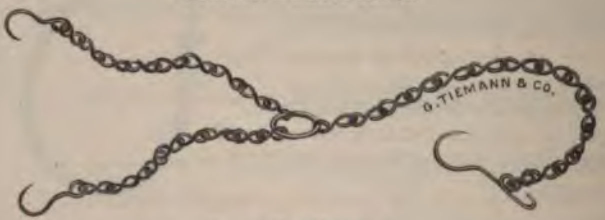
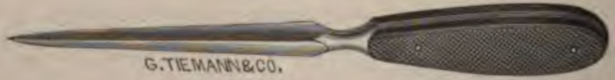

G. TIEMANN & CO.

FIG. 320.—Reamer.


G. TIEMANN & CO.

POST MORTEM AND DISSECTING.

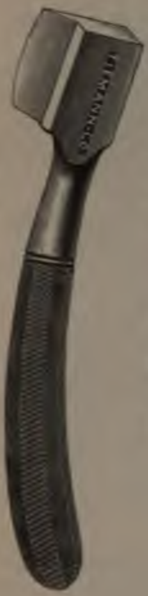

G.TIEMANN & CO.

FIG. 321.—Rachitome, Chisel.

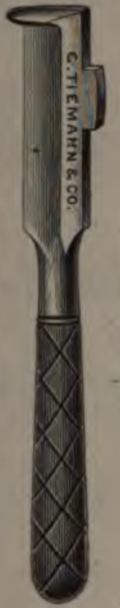

G.TIEMANN & CO.

FIG. 322.—Costotome, Chisel.

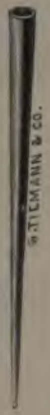
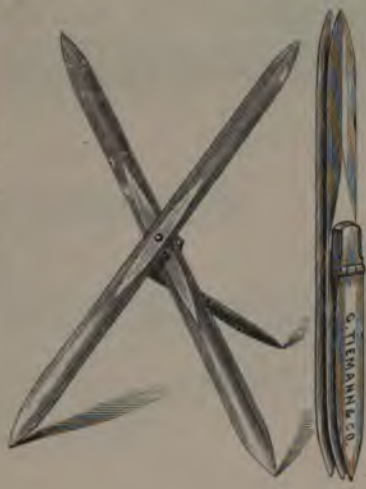

G.TIEMANN & CO.

FIG. 323.—Blowpipe.

FIG 324.—Tripod Head-Rest.


G.TIEMANN & CO.

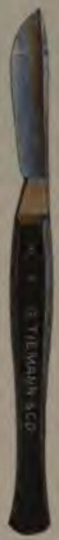

G.TIEMANN & CO.

FIG. 325.—Darling's Dissecting Scalpel.

FIG. 326.—Brain Knife.

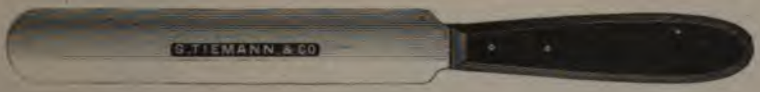

G.TIEMANN & CO.

FIG. 327.—Enterotome.

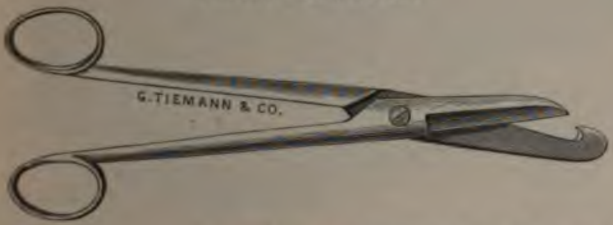

G.TIEMANN & CO.

FIG. 328.—Calvarian Hook.

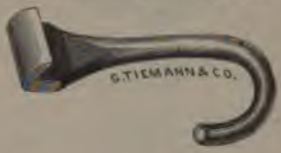
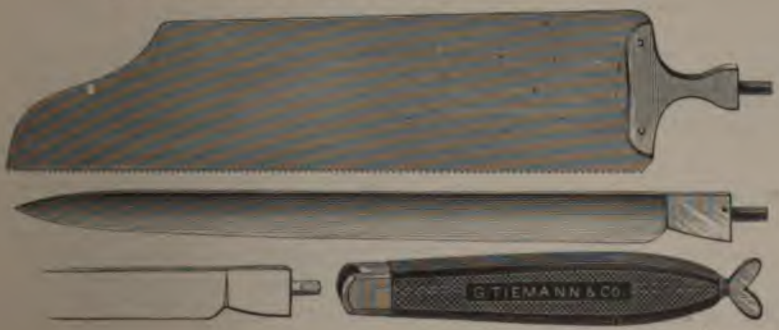

G.TIEMANN & CO.

FIG. 329.—1 Post-mortem Saw, 1 Knife and 1 Handle.


G.TIEMANN & CO.

DISSECTING SETS.

No. 1 Dissecting Set.

Price, $8.00.

1 Steel Handle Cartilage Knife.
4 Ebony Handle Scalpels, assorted.
1 Steel Handle Dissecting Hook.
1 German Silver Blowpipe.
1 pair of Straight Dissecting Scissors.
1 pair of Dissecting Forceps.
1 set of Chain Hooks.
1 Chisel.
1 Mahogany or Rosewood Case, with lock and key, neatly arranged, lined with velvet.

No. 2 Dissecting Set.

Price, $7.00.

1 Steel Handle Dissecting Hook.
4 Ebony Handle Scalpels, assorted.
1 Steel Handle Cartilage Knife.
1 set of Wire Chain Hooks.
1 pair of Dissecting Forceps.
1 pair of Straight Dissecting Scissors.
1 German Silver Blowpipe.
1 Mahogany Case, lined with velvet.

No. 3 Dissecting Set.

Price, $6.25.

1 Steel Handle Dissecting Hook.
3 Ebony Handle Scalpels, assorted.
1 Steel Handle Cartilage Knife.
1 set of Wire Chain Hooks.
1 pair of Dissecting Forceps.
1 pair of Straight Dissecting Scissors.
1 German Silver Blowpipe.
1 Mahogany Case, lined with velvet.

No. 4 Dissecting Set.

Price, $6.00.

1 Steel Handle Cartilage Knife.
3 Ebony Handle Scalpels, assorted.
1 Steel Handle Dissecting Hook.
1 set of Wire Chain Hooks.
1 pair of Dissecting Forceps.
1 pair of Straight Dissecting Scissors.
1 Mahogany Case, lined with velvet.

No. 5 Dissecting Set.

Price, $5.50.

1 German Silver Blowpipe.
2 Ebony Handle Scalpels.
1 Steel Handle Dissecting Hook.
1 Steel Handle Cartilage Knife.
1 pair of Dissecting Forceps.
1 pair of Straight Dissecting Scissors.
1 set of Wire Chain Hooks.
1 Mahogany Case, lined with velvet.

No. 6 Dissecting Set.

Price, $5.25.

2 Ebony Handle Scalpels.
1 Steel Handle Dissecting Hook.
1 Steel Handle Cartilage Knife.
1 pair of Dissecting Forceps.
1 pair of Straight Scissors.
1 set of Wire Chain Hooks.
1 Mahogany Case, lined with velvet.

Darling's Dissecting Set.

Price, $5.75.

3 Darling's Scalpels, ebony handles, assorted.
1 set of Adjustible Chain Hooks.
1 pair of Coxeter's Dissecting Forceps.
1 pair of Curved up Dissecting Scissors.
1 Mahogany Case, lined with velvet.

Microscopic Dissecting Set.

Price, $15.00.

1 Needle Holder.
6 Needle Points.
1 Section Knife.
1 Fine Lacerating Needle.
1 Heavy Lacerating Needle.
3 Ebony Handle Microscopic Scalpels, assorted.
1 pair of Straight and Delicate Microscopic Dissecting Forceps.
1 pair of Curved, Delicate Microscopic Dissecting Forceps.
1 pair of Straight, Delicate Scissors.
1 pair of Delicate Scissors, curved on the flat.
1 Neat Rosewood Case, lined with silk velvet.

Our Patent Dissecting Case.

Price, $3.50.

1 Steel Handle Cartilage Knife.
3 Ebony Handle Scalpels.
1 Steel Handle Dissecting Hook.
1 set of Wire Chain Hooks.
1 pair of Dissecting Forceps.
1 pair of Straight Dissecting Scissors.
1 Blowpipe.
1 Strap to sharpen the scalpels.
1 Black Walnut Case.

POST MORTEM SETS.

No. 1 Post Mortem Set.

Price, $28.00.

1 Hammer.
1 Costotome (Rib Shears).
1 Ebony Handle Cartilage Knife.
2 Ebony Handle Scalpels, assorted.
1 Steel Handle Dissecting Hook.
1 pair of Coxeter's Dissecting Forceps.
1 Enterotome.
1 set of Heavy Chain Hooks.
1 pair of Straight Scissors.
1 Saw.
1 Amputating Knife.
1 Handle to fit the Saw and Knife.
1 Chisel.
1 Reamer.
2 Needles, Thread and Wax.
1 Mahogany Case, with a slide or lock, lined with velvet.

No. 2 (Hutchison's) Post Mortem Set.

Price, $24.00.

1 Amputating Knife.
1 Saw.
1 Handle to fit the above.
1 Chisel.
1 pair of Straight Dissecting Scissors.
1 set of Chain Hooks.
1 pair of Dissecting Forceps.
1 Aneurism Needle.
1 Metacarpal Saw.
3 Ebony Handle Scalpels, assorted.
1 Steel Director.
1 Probe-pointed Bistoury.
1 Hammer.
1 Steel Handle Dissecting Hook.
1 large Ebony Handle Cartilage Knife.
1 German Silver Blowpipe.
2 Needles, Silk and Wax.
1 Rosewood Case, with lock and key, lined with velvet.

No. 3 Post Mortem Set.

Price, $22.00.

1 Hammer.
1 Costotome Chisel.
1 Steel Handle Cartilage Knife.
3 Ebony Handle Scalpels, assorted.
1 Steel Handle Dissecting Hook.
1 pair of Plain Dissecting Forceps.
1 Enterotome.
1 set of Heavy Chain Hooks.
1 German Silver Blowpipe.
1 Plain Chisel.
1 pair of Straight Dissecting Scissors.
1 Amputating Knife.
1 Saw.
1 Handle to fit the Knife and Saw.
2 Needles, Thread and Wax.
1 Mahogany Case, with a slide or lock, lined with velvet.

Pinnel's Post Mortem Set.

Price $12.50

1 Amputating Knife.
1 Saw.
1 Handle to fit the above.
3 Ebony Handle Scalpels, assorted.
1 Steel Handle Cartilage Knife.
1 pair of Straight Dissecting Scissors.
1 Ebony or Steel Handle Tenaculum.
1 set of Heavy Chain Hooks.
1 German Silver Blowpipe.
1 pair of Dissecting Forceps.
2 Needles and Thread.
1 Chisel.
1 Rosewood Case, with lock and key, lined with velvet.

POST MORTEM.

FIG. 330.—Post Mortem Hammer.

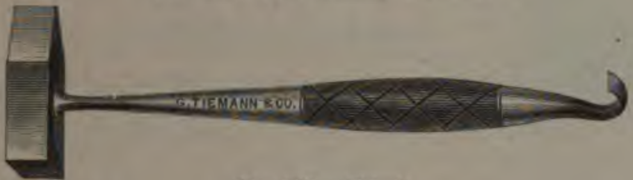


FIG. 331.—Chisel.

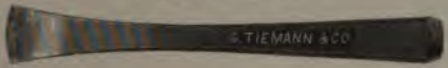


FIG. 332.—Finnell's Knife, Saw and Handle.

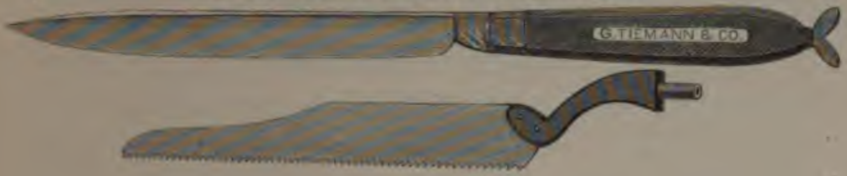
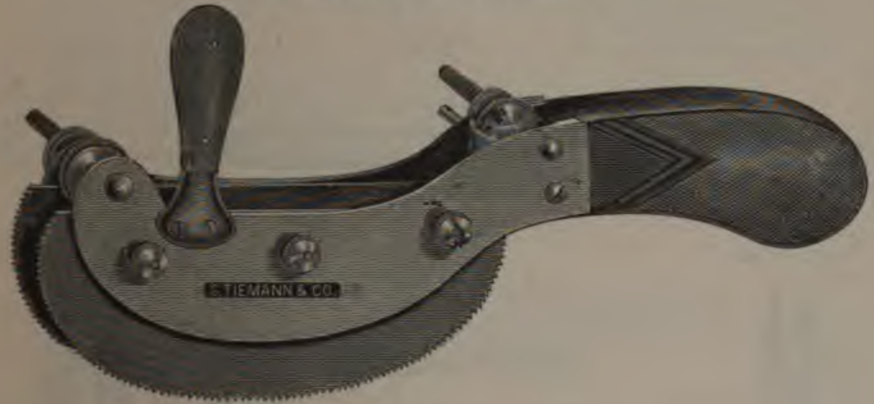


FIG. 333.—Double Rachitome.



PHYSIOLOGICAL EXPERIMENTS.

FLINT'S ARMAMENTARIUM FOR PHYSIOLOGICAL EXPERIMENTS.

Contents of complete set in case:

1 Portal Vein Ligator. Fig. 334.
1 pair Bone Forceps, for opening spinal canal. Fig. 335.
1 Hey's Saw, for opening spinal canal. Fig. 336.
1 pair Forceps, for extirpating the spinal accessory nerve. Fig. 337.
1 Drill for breaking up medulla oblongata. Fig. 338.
1 pair Bone Forceps, shear handles. Fig 339.
2 Blunt Hooks, for hooking up roots of spinal nerves. Fig. 340.

(Continued on next page.)

PHYSIOLOGICAL EXPERIMENTS.

FLINT'S ARMAMENTARIUM FOR PHYSIOLOGICAL EXPERIMENTS.

(Continued.)

2 Knives, for intra-cranial division of the root of the fifth nerve. Fig. 341.
2 Piques, for irritation of the floor of the fourth ventricle. Fig. 342.
1 Bull-dog Forceps, for drawing out the stomach in making a gastric fistula. Fig. 343.
2 Gastric Fistula Tubes. Fig. 344.
1 Catheter, for catheterizing the right side of the heart. Fig. 345.
2 Dissecting Tenacula, steel handles. Fig. 315.
1 pair long-pointed Dissecting Forceps. Fig. 346
1 pair medium Dissecting Forceps. Fig. 347.
1 pair short Dissecting Forceps. Fig. 348
1 Enterotome. Fig. 327.
1 Blowpipe, with mouth-piece, stop-cock and 2 points. Fig. 349.
1 Lifting-Back Saw, 9 inches long. Fig. 352.
1 Lifting-Back Saw, 7½ inches long. Fig. 352.
1 pair Scissors—one probe-point, the other sharp. Fig. 351.
2 pair Pointed Scissors. Fig. 351.
3 Langenbeck's Steel Serresfines. Fig. 103*d*.
1 Heavy Cartilage Knife. Fig. 350.
3 Scalpels, assorted sizes. Figs. 17, 18, 19.
1 Probe-pointed Bistoury. Fig. 27.
3 Microscopic Needles, each in handles. Fig. 306.
1 Tenotome. Fig. 22.
1 Artery Needle. Fig. 32.
1 Mahogany Case, lined with oil-dyed velvet............................ .. $70.00

FIG. 334.—Portal Vein Ligator.

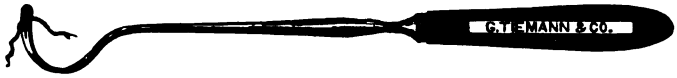


FIG. 335.
Bone Forceps, for opening spinal canal.

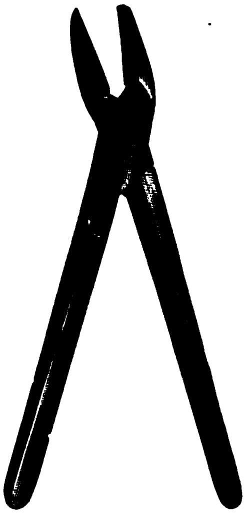


FIG. 339.
Bone Forceps

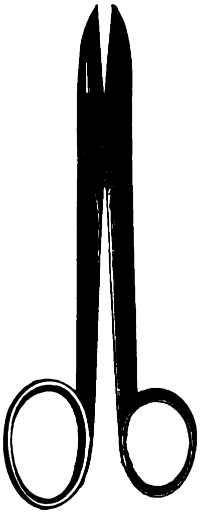


FIG. 336.—Hey's Saw.

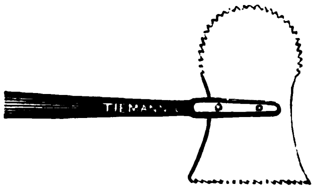


FIG. 337.—Forceps, for extirpating the spinal accessory nerve.

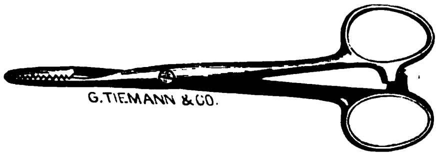
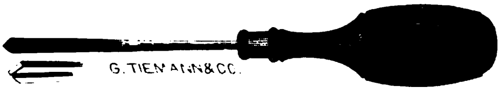


FIG. 338.—Drill, for breaking up medulla oblongata.



PHYSIOLOGICAL EXPERIMENTS.

FIG. 340.—Blunt Hooks, for hooking up roots of spinal nerves.

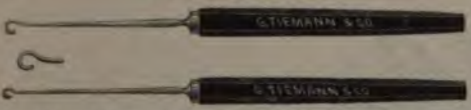

G.TIEMANN & CO.
G.TIEMANN & CO.

FIG. 341.—Knives, for intra-cranial division of the root of the fifth nerve.

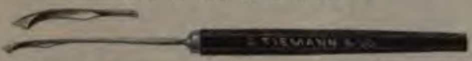

G.TIEMANN & CO.

FIG. 342.—Piques, for irritation of the floor of the fourth ventricle.

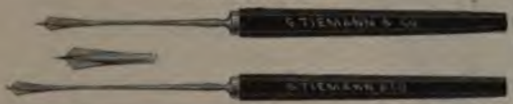

G.TIEMANN & CO.
G.TIEMANN & CO.

FIG. 344. Gastric Fistula Tubes.

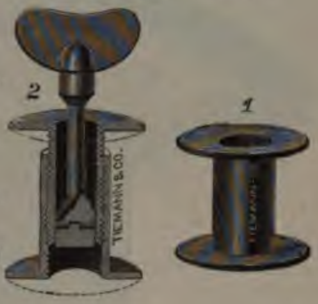


FIG. 345.—Catheter, for catheterizing the right side of the heart.

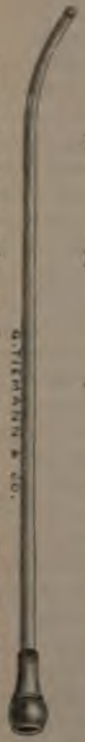


FIG. 343.—Bull-dog Forceps, for drawing out the stomach in making a gastric fistula.

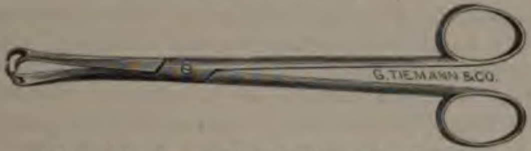

G.TIEMANN & CO.

FIG. 346.—Long-pointed Dissecting Forceps.

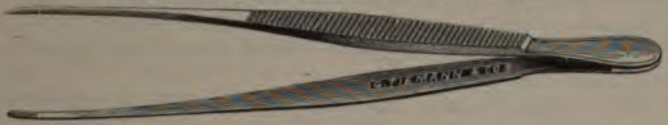

G.TIEMANN & CO.

FIG. 347.—Medium Dissecting Forceps.

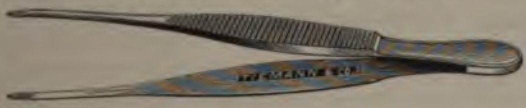


FIG. 351.—Probe-pointed Scissors.

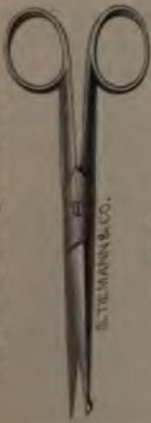

G.TIEMANN & CO.

FIG. 348.—Short Dissecting Forceps.

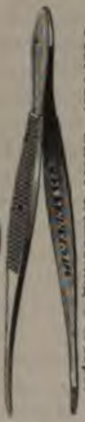


FIG. 349.—Blowpipe—2 Points, Mouth-piece and Stop-cock.

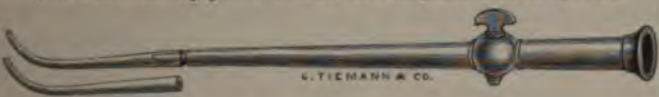

G.TIEMANN & CO.

FIG. 350.—Cartilage Knife (stout).

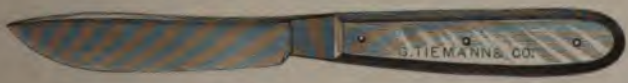
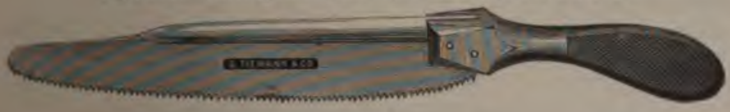
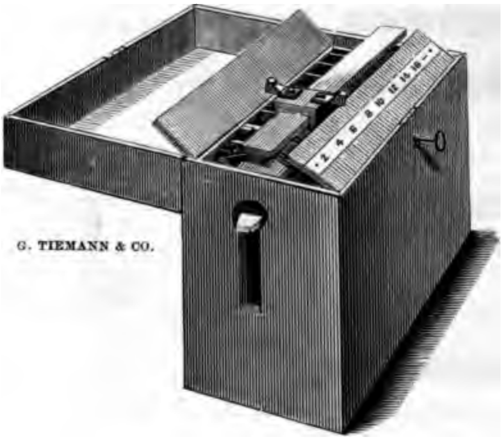

G.TIEMANN & CO.

FIG. 352.—Lifting-back Saw (see also fig. 58, Part I.)


G.TIEMANN & CO.

ELECTRO-THERAPEUTIC.

FIG. 353.—Stoehrer's Galvanic Battery (Constant Current).


G. TIEMANN & CO.

(*Abridged from Beard & Rockwell's work on Medical and Surgical Electricity.*)

HOW THE BATTERY IS CONSTRUCTED AND USED.—This battery is composed of plates of zinc and carbon in a solution of bichromate of potass, sulphuric acid, and water. The solution is contained in glass jars that are raised up to the plates of zinc and carbon by the keys at the ends of the box. When the jars are raised by the keys to the top of the box, *turn the keys at right angles* and the jars will stay in position, and the battery is ready for use, if the jars are properly filled with the solution. By means of the slide on the top, the current can be increased two cells at a time, as indicated by the graduated plane at the side.

When the battery is not in use the jars should be let down from the plates by means of the keys. If allowed to remain immersed day after day the battery will rapidly lose its strength.

HOW TO CHARGE THE BATTERY.—The solution is made in about the following proportions: sulphuric acid, 1 oz.; bichromate potass, 1¼ oz.; water, 10 oz. The best way to make the solution is to dissolve the bichromate of potass in cold water and then add the sulphuric acid. The mingling of the water and sulphuric acid causes great heat. Do not use the solution until it is cool.

Lift out the plates by the middle piece to which they are attached, lift up the jars by the keys and fill each jar with two, or three, or three and a-half ounces of the solution. They should be filled pretty uniformly, and care should be taken that no more should be put in than the jar will hold after the plates are immersed.

HOW TO CLEAN THE BATTERY AND AMALGAMATE THE ZINCS.—Every few weeks or months, according to the extent to which the battery is used, it will be necessary to wash the plates and scrape off the incrustations and renew the solution, or, at least, to add more acid or water, and amalgamate the zincs. A good way to amalgamate the zincs is, take a strip of zinc, dip it in a solution of sulphuric acid and water, then dip it in mercury; the mercury will adhere to and run over it; then rub it up over the surface of the zincs of the battery until all are well covered with mercury. During the process of amalgamation the zincs should be kept well moistened with a solution of sulphuric acid and water.. The *brass work* of the battery should be *kept clean and bright*, so that the current may flow readily.

HOW TO TELL THE STRENGTH OF THE CURRENT.—Those who have no galvanometer can tell whether the current is running and how strong it is by putting one pole in the hollow of the hand, and the other between the thumb and forefinger. The poles should be of sponge, wet with salt-water or simple warm water. Those who have been accustomed only to the noisy and violent Faradic (induced) current, will be disappointed to find that this galvanic current causes only a *slight burning sensation*, with no shocks, except when interrupted. A current that is scarcely felt when applied in the hand, may be too strong to apply to the head, or face, or neck. *The greatest mistakes are made by using the galvanic current too strong.*

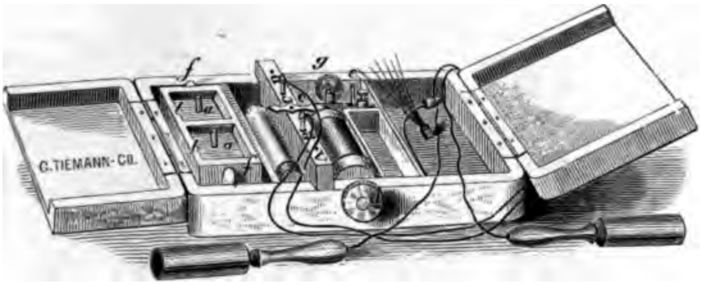
HOW TO DISTINGUISH THE POLES.—The current is felt strongest at the NEGATIVE POLE. When both poles are dipped in a solution of Iodide of Potassium, the brown color of the iodine appears at the POSITIVE POLE.

Stoehrer's 8 Cell Battery	$20.00
" 16 " "	30.00
" 32 " "	55.00

Each with a pair of Handles and the Conducting Cords.

ELECTRO-THERAPEUTIC.

FIG. 354.—Gaiffe's Battery (Farradic Current).



It gives: 1. The primary current; 2. The secondary current; 3. The current of the two first, combined in intensity; 4. Shocks, slow or fast, according to the use either of the contact breaker or the lever.

Admitting that the three currents produce the same physiological effects, they give a series of results increasing in intensity.

The battery working this instrument consists of a small rectangular cell of hard rubber divided in the middle, each part containing a carbon plate and also one of zinc. Each is charged with bi-sulphate of mercury and water, producing no fumes or smell whatever.

To prepare the apparatus for use: remove the zincs *a a* from the gutta percha reservoir *b b*, place a few grains of bi-sulphate of mercury on the carbon plates contained in same reservoir and mix with a little water. Replace the zincs *a a*. Should the apparatus refuse to work, give the vibrator *c* an impulse with your finger.

The power of the apparatus is regulated by pulling out the tube *d* more or less, and *increased* by adding to the dose of bi-sulphate of mercury.

By placing the conducting wires in their sockets *A B*, we have the *primary*, in *A C* the *extra*, and in *A D* the primary and secondary currents.

To produce *shocks* press on the button *e*.

After use, clean out the reservoirs, wash and dry them.

To keep the apparatus in repair:

a. Oxide often forms on the platina of the vibrator *c*, clean it by rubbing it softly with a small smooth file.

b. The same may happen to the springs *f f* which touch the platinum wires emerging from the reservoir; clean them in like manner, and as they serve the double purpose of holding in place the reservoirs and forming the connection with the instrument—it is necessary to rebend them, should they cease to touch the wires.

c. The ends of the conducting wires and their sockets *A B C D* should also be kept clean, which may be done with powdered pumice stone and a rag, the holes cleaned out with pumice stone and a piece of wood.

Accessories to the Battery:

1. A pair of Sponge Holders.
2. An olive shaped Excitor.
3. A spherical Excitor.
4. A metallic Brush.

Price of Apparatus	$12.00
Same, nickel-plated	14.00
Extra Troughs, each	1.75
Extra Zinc Plates, each	.20
Bi-sulphate of Mercury, per oz	.25

ELECTRO-THERAPEUTIC.

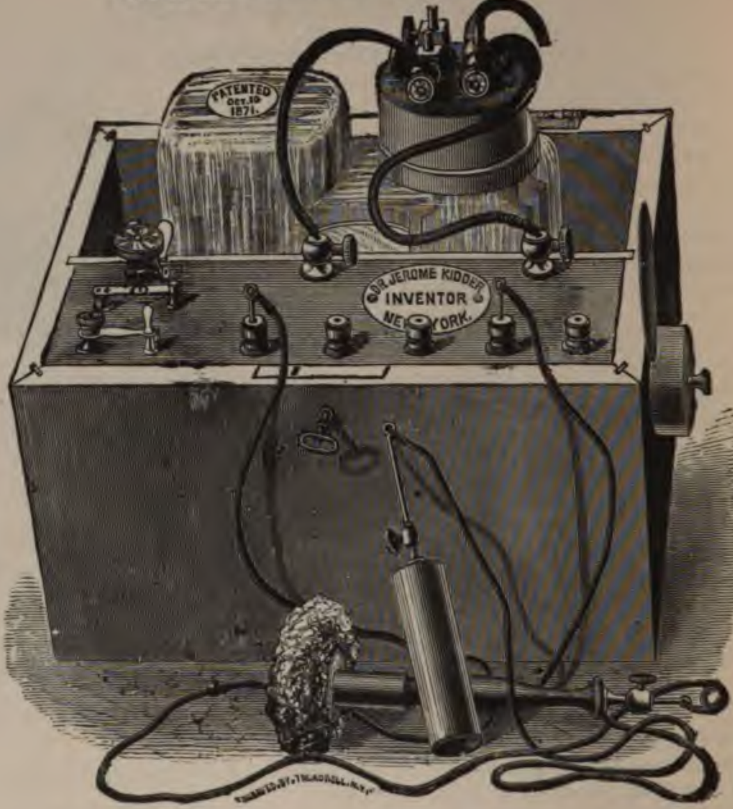
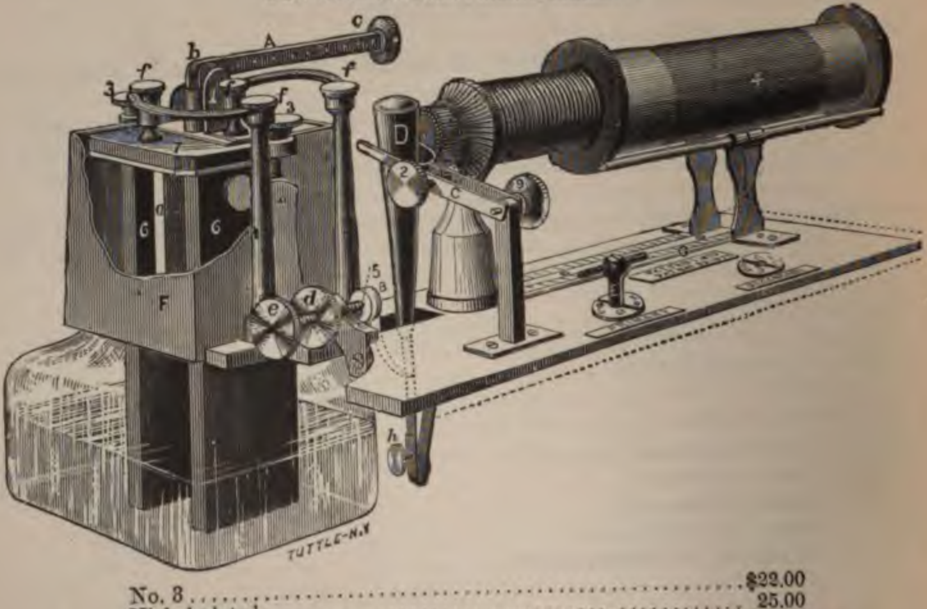

PATENTED OCT. 10 1871.
DR. JEROME KIDDER INVENTOR NEW YORK

FIG. 355.—Kidder's Tip Battery.

Is charged or uncharged by merely tipping it one way or the other. It is a perfect Hydrostat, to be carried without spilling the fluid.

$27.00.

FIG. 356.—Galvano-Faradic Machine.



No. 3	$22.00
Nickel-plated	25.00

F. A. Stohlmann. **Edward Pfarre.**

ELECTRO-THERAPEUTIC.

FIG. 357.—Kidder's Family Battery. $16.00.

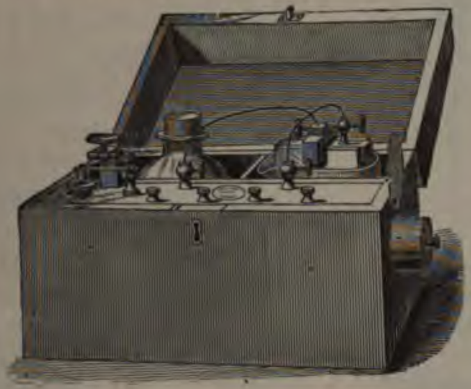


FIG. 358.—Johnson's Electric Self-Monitor.

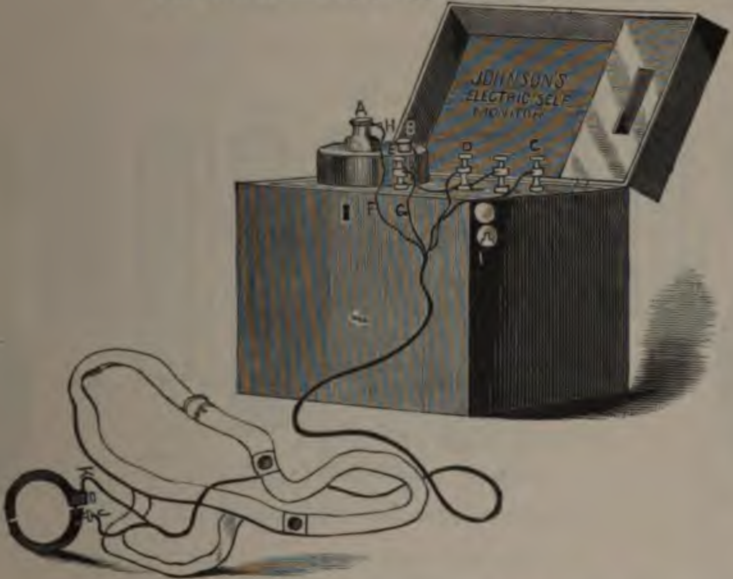
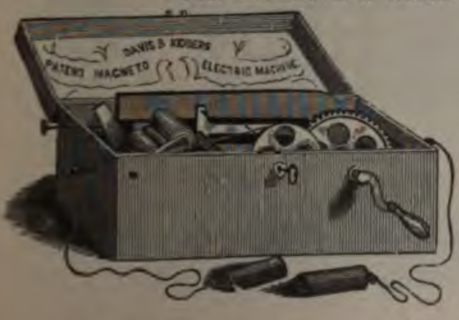


FIG. 359.—Davis & Kidder's Magneto-Electric Machine.



For Nervous Diseases.

Instructions for use, in the English, German, and Spanish languages, accompany each apparatus.

$10.00.

ELECTRO-THERAPEUTIC.

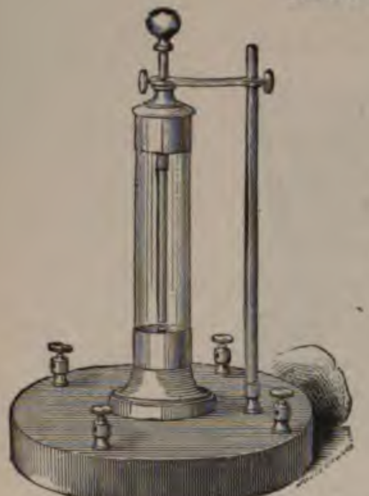


FIG. 360.—Hydro-Rheostat.

The object of the Rheostat is to vary the intensity of the current by passing it through water. It is an important accessory, inasmuch as by it the physician can gradually increase the power without giving any shock to the patient, which is indispensable in the treatment of the organs of special sense and the nervous centres.

Can be used with any galvanic battery or electro-magnetic machine.

$10.00.

FIG. 331.—The Voltaic Armadillo.

An electro-magnetic remedy for nervous diseases.

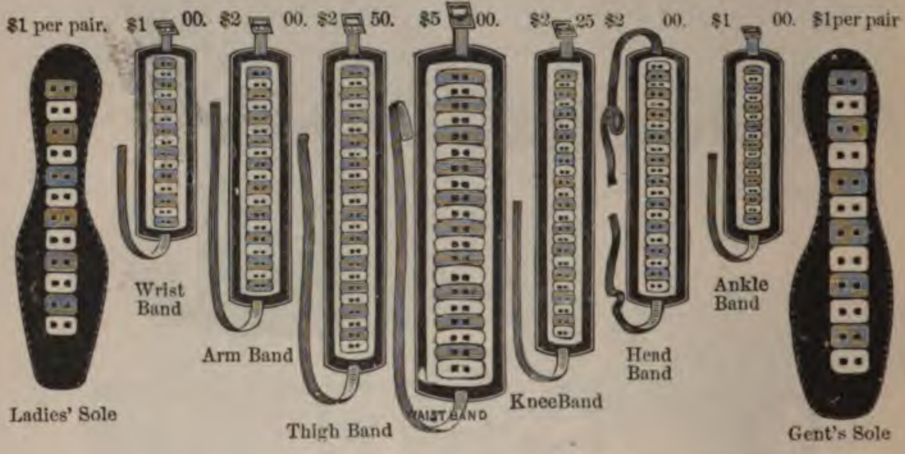
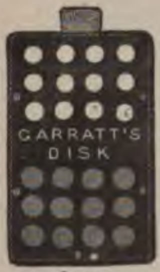


FIG. 362.—Garratt's Electric Disk.

Flexible, self-acting, comfortable, vitalizing and durable



Large Disk, 5 x 8 inches.

Best for most cases.

$2.50.

Long Disk, 4 x 12 inches, and strap to go around the body, $3.50.

Extra Long Disk, 4 x 8 inches, and strap with buckle for larger body, $5.00.

Children's Disk, 2 x 5 inches.

Also, for throat, face, temple, ankle, &c.

$1.00.

A constant medico-electric relief for local pains and weakness, for old rheumatic and neuralgic pains, coldness and stiffness, weak lungs, heart, stomach, kidneys, sluggish liver, lame back, and other ailments.

ELECTRO-THERAPEUTIC.

ELECTRODES.

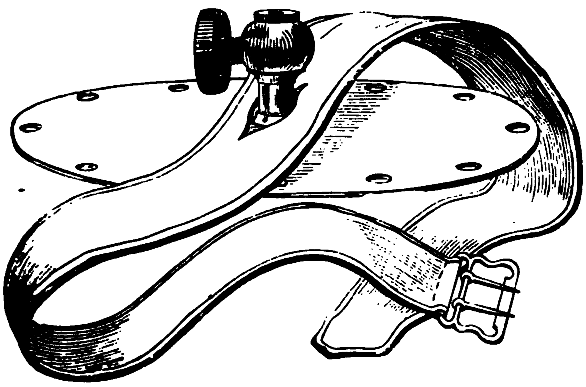
Instruments for localized electrization may be used in connection with any galvanic or faradic apparatus.

To affect the tissues beneath the epidermis, electrodes covered with sponge, chamois, or flannel moistened with salt-water are most efficient.

Duchenne used the faradic current making applications to muscles. Remak applied the galvanic current to motor nerves.

Niemeyer says : "In the *constant current* we have the means more powerful than any other of modifying the nutritive conditions of parts that are deeply situated.

FIG. 363.—Beard's Adjustable Electrode, with Band.



These are made of different sizes. They can be kept in contact with any part of the body by means of a single cloth band. They may be covered with sponge or with electrode covers made of flannel, provided with elastic in their edges to keep them in position and allow of slipping them on and off easily.

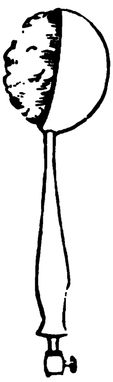


FIG. 368.—Side Sponge Electrode.

FIG. 364.—Beard's Adjustable Electrode, with Flannel Cover.

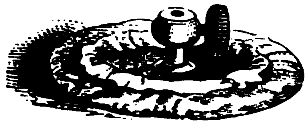


FIG. 365.—Metallic Brush Electrode.

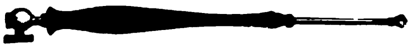
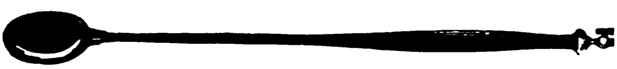


FIG. 366.—Spinal Electrode.



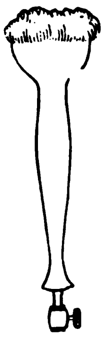
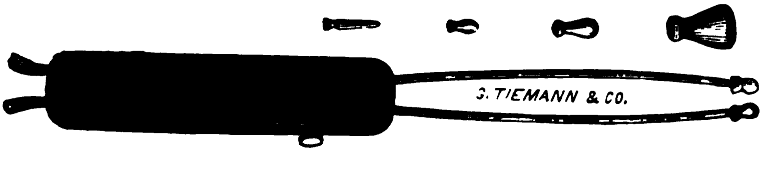


FIG. 367.—Sponge-Holder Electrode.

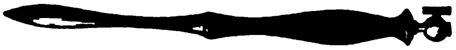
FIG. 369.—Piffard's Electrodes.

For localized electrization. Duchenne's method.



ELECTRO-THERAPEUTIC.

Fig. 370.—Rectal Electrode (non-insulated).



To relieve obstinate cases of constipation by internal application, the other pole may be applied at different points over the abdomen.

Fig. 371.—Insulated Rectal Electrode.

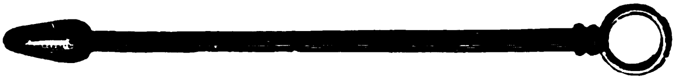


Fig. 372.—Double Rectal Electrode.

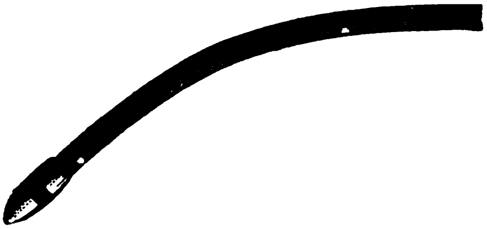
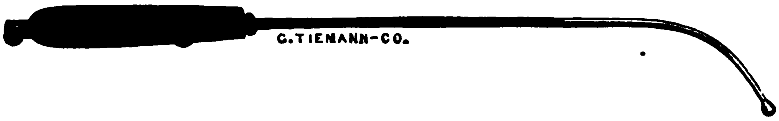
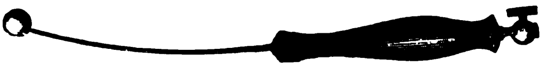


Fig. 373.—Intra-Uterine Electrode.



The basis is similar to Sim's Sound. This is insulated by a rubber catheter, leaving the point bare as far as desired. The handle is of hard rubber; it is connected to the wire of the apparatus by a hole and thumb-screw. By a spring button the connection of the current can be made or broken at pleasure. This makes it convenient to give rapid interruptions and to instantaneously suspend the treatment when required.

Fig. 374.—Uterine Electrode.



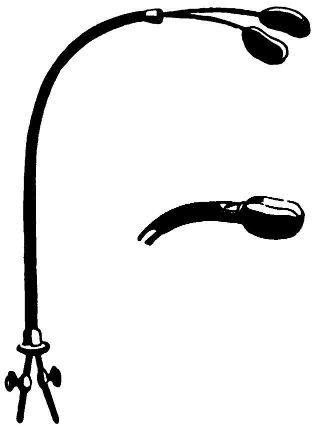


Fig. 375.—Duchenne's Double Uterine Electrode.

This is composed of two plates, insulated from each other, and passing through a gum catheter. One of the insulated wires is connected with the positive, the other with the negative pole. On pushing the wires forward, and through the catheter, the plates open; the neck of the uterus may then be clasped by drawing on the wires.

ELECTRO-THERAPEUTIC.

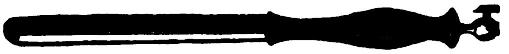


FIG. 376.—Vaginal Electrode.

May be connected with either positive or negative pole; useful in leucorrhœa and prolapsus.

FIG. 377.—Intra-Uterine Galvanic Pessary.

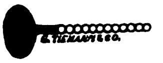


FIG. 378.—Hank's Galvanic Pessary.

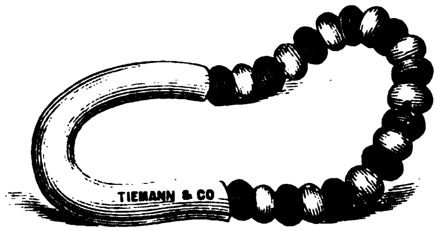
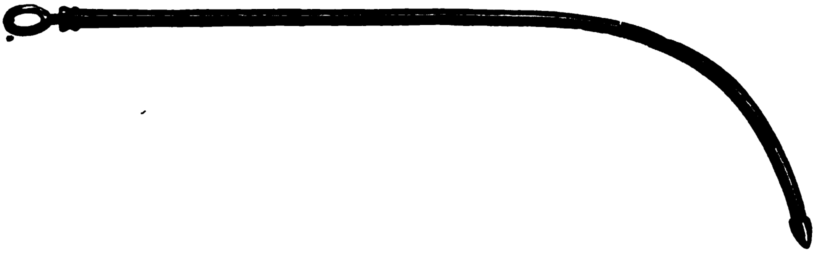
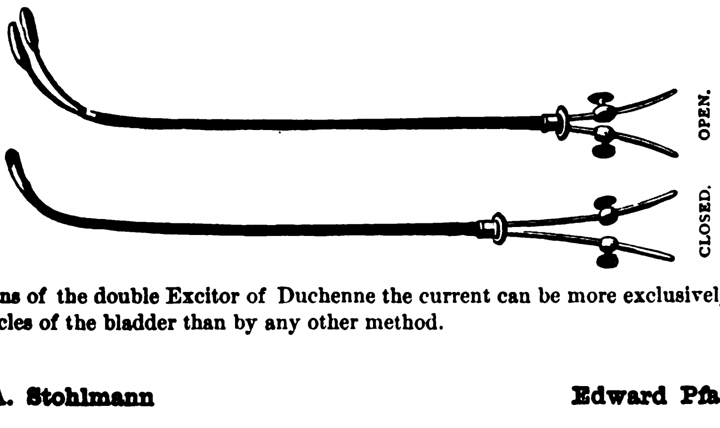


FIG. 379.—Insulated Catheter Electrode, for electrization of the male genital organ.



The Catheter Electrode may be connected with the negative pole while the positive is at the hypogastric region or back.

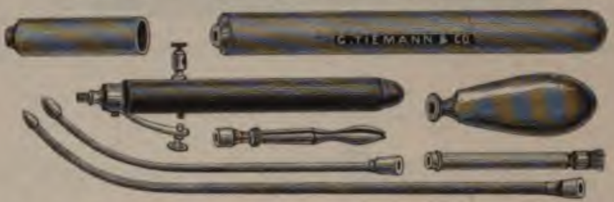
FIG. 380.—Duchenne's Double Vesical Excitor or Electrode, for treating incontinence of urine and paralysis of the bladder.



By means of the double Excitor of Duchenne the current can be more exclusively localized in the muscles of the bladder than by any other method.

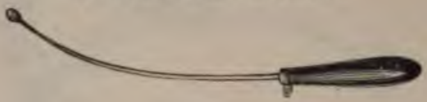
ELECTRO-THERAPEUTIC.

FIG. 381.—Tiemann & Co.'s Set of Electrodes.



1 Universal Handle; 1 Rectal- and Vaginal-; 1 Sponge Holder-; 1 Tongue-; 1 Needle Holder-; 1 Wire Brush-; 1 Uterine-; 1 Vesical Electrode. In Morocco Case $12.00

FIG. 382.—Nasal Electrode.



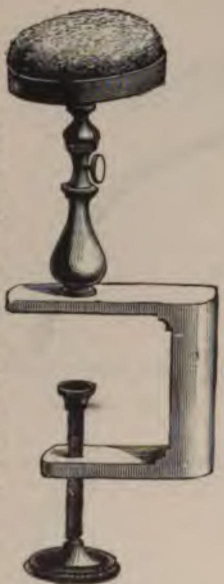


FIG. 383.—Beard's Stationary Electrode.

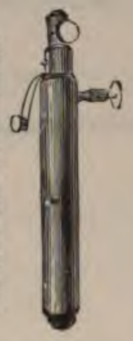


FIG. 384. Universal Electrode Handle.

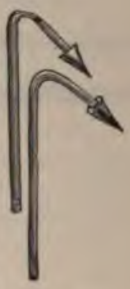


FIG. 385. Duchenne's Pointed Electrode.

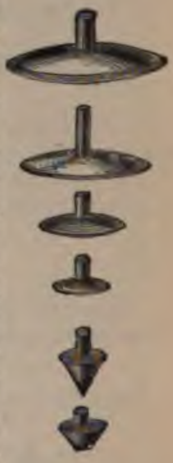


Fig. 386.—Electrodes fitting the Universal Handle.

FIG. 387. Rockwell's Brass Ball Electrode.

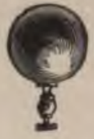
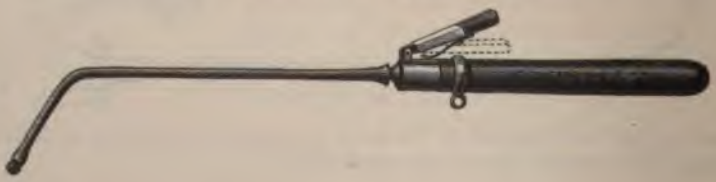


FIG. 388.—Mackenzie's Laryngeal Electrode.



ELECTRO-THERAPEUTIC.

FIG. 389.—Beard's Current Changer.

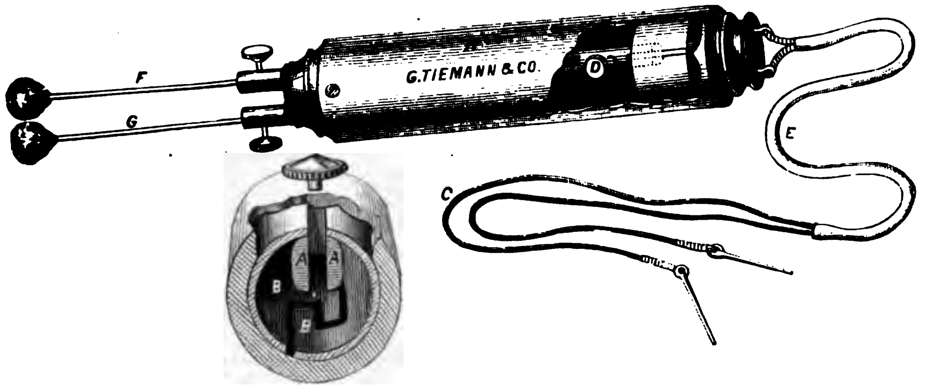


Fig. 389 represents a current-reverser recently devised and perfected, and which was first constructed by Messrs. Tiemann & Co.

It differs mainly in this feature from other devices to accomplish the same purposes, viz.: that the current is reversed by simple and slight pressure of the thumb, without the intervention of a slide or any complex arrangement whatever. The letter *D* represents the button of the spring, by pressing which the current is interrupted or reversed. Pressing it lightly, *interrupts* the current, pressing it firmly *reverses* it. In the vertical section of the hard rubber handle *A A* is represented as springing up against a metallic plate on the upper and inner surface of the handle. Pressing it slightly down, the metallic connection is broken and the current is interrupted; pressing it firmly down, the connection is made and reversed at *B B*, the metallic plate on the lower surface of the handle.

C represents the wires that connect with the battery, enclosed in a rubber tubing *E*.

F and *G* are flexible wire electrodes armed with sponges; they can be separated several inches and kept there, or put close together, as represented in the cut. The advantages of this are these: 1. In many of the applications of localized electrization this neat and simple arrangement saves considerable expenditure of muscle on the part of the operator. One hand can be perfectly free, while the other holds and guides the electrode. In electrizing the muscles of the hand and arm, and of the face especially, it is far more convenient than to use separate electrodes.

2. In cases of paralysis of motion and of sensation, where voltaic alternatives are sometimes indicated, this is the easiest conceivable method of reversing the current.

◆

CARE OF ELECTRODES.

The chemical action of battery currents corrodes any metal that is used for electrodes, except platinum, which is however too expensive to find general employment. Copper used for the foot plates, brass used generally for various electrodes becomes corroded, and in this condition refuses to work satisfactorily.

They need to be polished or cleansed occasionally, which may be done by rubbing with fine sand paper, ground pumice stone or emory.

It is best however to have the electrodes nickel-plated, as this will protect them in a certain measure.

The sponges, attached to electrodes, should be washed in warm water, or changed with new ones from time to time.

By having a good supply of Beard's electrode covers (fig. 364), they can be changed after using them a few times and washed like towels weekly, or they may be cast aside entirely, the cost of making them being very slight.

ELECTRO-THERAPEUTIC.

ELECTROLYSIS.

Decomposition of compound substances by electricity. Electrolytic action is chiefly obtained by the galvanic current of batteries consisting of a considerable number of elements of medium size. Those generally employed are such as Stöhrer's apparatus, 16 and 32 cells.

Electrolysis Conductors.

For the Treatment of Aneurism, Varicose Veins, Tumors, &c.

For producing electrolysis in tissues beneath the skin, fine needles of gold, gilded steel or platinum are used. Gold and platinum resist oxidation better than any other metal. The needles are insulated with hard rubber, collodion or shellac about two-thirds or more of their length, so that when introduced into a tumor they do not act on the skin. Hard rubber is preferable for insulating. GEO. TIEMANN & Co. make these needles very fine and without any shoulder. The rubber being baked on and highly polished, they are flush with the metal and very easy to introduce.

It is believed that the electrode, connected to the positive pole of a galvanic battery and applied to the body, acts like an acid—hardening the tissue: the negative pole acting like an alkali—causing increase of fluid. Tumors have also been resolved by magneto-electricity, hydrocele successfully treated by farado-puncture, poisonous metals removed from the body by electro-chemical baths.

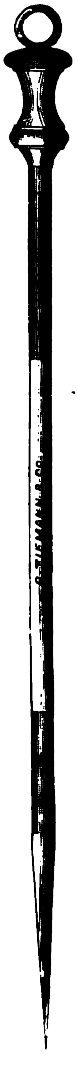


FIG. 390.—Murray's Electrolysis Needle.
(MAGNIFIED VIEW.)

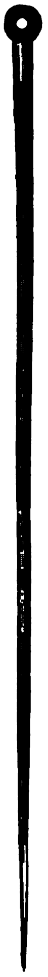
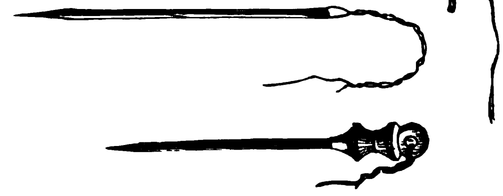


Fig. 391.—Rockwell's Long Electrolysis Needle.
For electrolysis of uterus through the vagina or the walls of the abdomen.

FIG. 392.—Trocar-Pointed Electrolysis Needles.



ELECTRO-THERAPEUTIC.

FIG. 393.—Rockwell's Needle Holder and Needles, for Electrolysis.

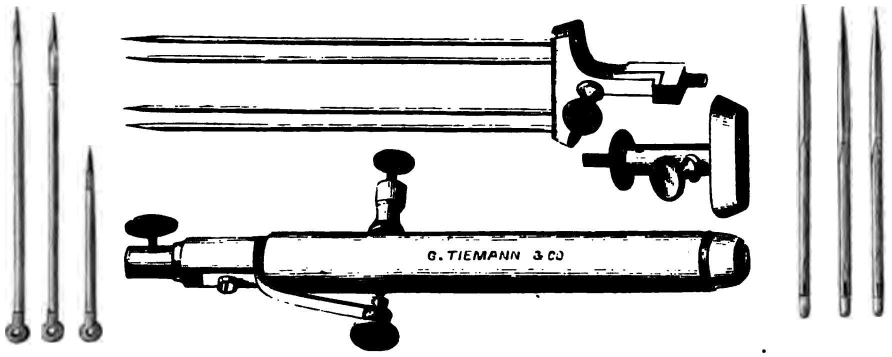
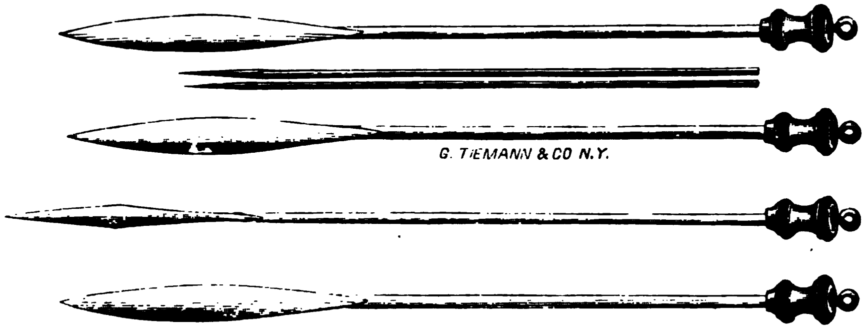


FIG. 394.—Beard's Long Cutting Needles, for Electrolysis of the Base.



These Needles are attached to connecting wires by fine flexible copper wire. This is useful for many purposes of connection, and when the thumb-screws are out of order or broken off it very well supplies their place.

◆◆◆

ELECTRO-SURGERY.

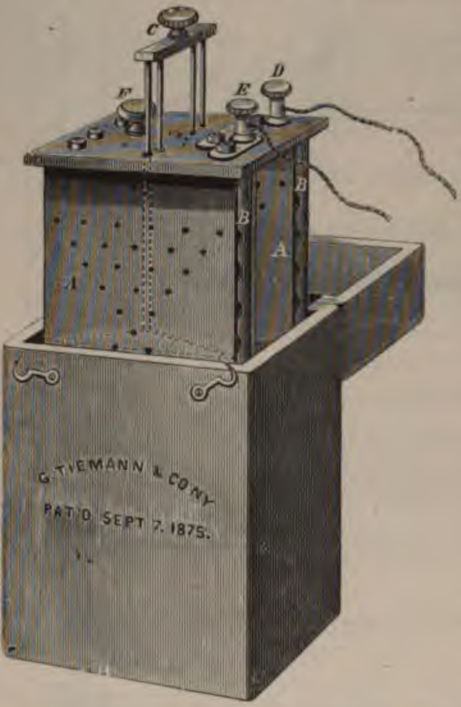
GALVANO-CAUTERY.

Galvano-Cautery is employed for removing cancerous, vascular and other tumors, for cauterizing hemorrhoids, fistulous openings and ulcers, for performing tracheotomy, amputations of the tongue and neck of the uterus, and for destroying neuralgic nerves, &c., and has the following advantages over other modes of operating: absence of the hemorrhage usual with cutting instruments, the cauterizing effects can be localized to parts that are not easily accessible to other instruments, and freedom from pain after the operation. The instruments employed are based on the principle of heating a resisting wire by the galvanic current. Platinum is the material best adapted to construct the electrodes, as it offers a greater resistance to the passage of the electric current than other metals, and cannot easily be burnt.

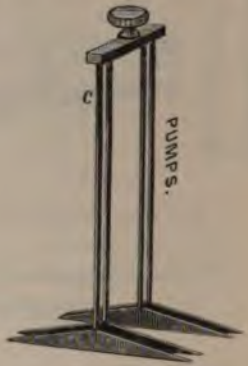
For Galvano-Cautery electrical intensity and quantity is required, to accomplish which the batteries made heretofore were bulky, inconvenient and expensive. Dr. Dawson has succeeded in constructing the most efficient and most portable apparatus, for which we obtained the PRIZE MEDAL AT THE CENTENNIAL EXHIBITION OF PHILADELPHIA, a description and cut of which follows.

ELECTRO-SURGERY.

FIG. 395.—Dawson's Galvano-Caustic Battery.



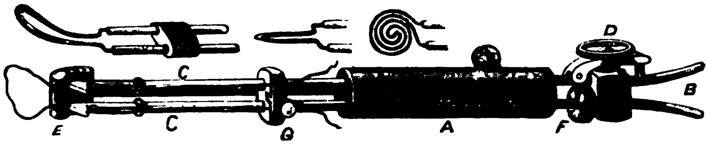
The adjoining woodcuts represent a galvanic battery, made on a principle devised by Dr. B. F. Dawson, of New York city. It is entirely novel in construction, more perfectly reliable, durable, and powerful than any other battery of similar size and cost, and for simplicity of construction, facility in working, and for continuance, uniformity and intensity of its power, has no superior. These advantages over other batteries lie in the principle of construction, and the means for preventing and overcoming what is known as "polarization" of the battery, the occurrence of which in all small batteries has heretofore rendered them unreliable and useless. The battery is composed of but two cells, in each of which are two positive (zincs) and one negative (platinum) plate, all measuring but 4½ by 6 inches. The zincs (*A*) are perforated, and adjusted but half an inch apart, and between them a platinum plate is placed and held in position by uprights (*B*). On each side of the platinum plates are hard rubber or celluloid pumps or agitators (*C*), worked by means of a small knob. *D* and *E* are the connecting screws, and *F* a knob for lifting the battery out of the cells. The entire battery requires but two and a-half pints of fluid, with which amount it will keep up a most powerful action, long enough for the most prolonged operation, by the moving up and down of the pumps (*C*), which, according to the intensity of the heat desired are moved more or less quickly. By this action, the old and exhausted fluid between the plates is thrown out through the perforations, and fresh fluid is made to take its place; thus keeping up a uniform power, equal in intensity and constancy to that obtained from the large imported batteries. In consequence of its power it has been found necessary to make special platinum cautery instruments of heavier metal to accompany this battery. Batteries have already been ordered by many of the most eminent surgeons and physicians, in place of others of foreign and domestic manufacture, which latter they pronounce inferior to this in portability, simplicity, reliability, power and compactness. *The entire battery, with polished wood case, measures 8½ inches in height, 6 inches in width, and 4 inches in depth from front to back.* Each battery will be fully guaranteed to prove all that is claimed for it. Directions, &c., accompany each. In ordering platinum cautery knives and wire, it will be best to state for what class of operations it is designed to use them, for thus satisfaction will be more perfectly secured. *The principle upon which this battery is constructed being applicable to all galvanic batteries, for whatever use, was patented Sept. 7th, 1875, No. 167,510.*



◆

ELECTRO-SURGERY.

FIG. 396.—Dawson's Universal Cautery Electrode.

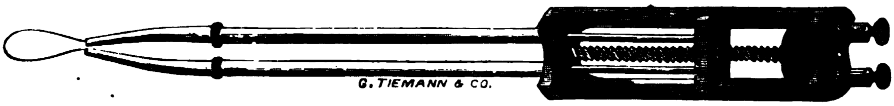


The above woodcut represents a Universal Electrode for galvanic cautery operations. Of the simplest mechanism, it also combines strength, lightness, durability and perfect reliability, either as a galvanic cautery *écraseur*, or cautery knife, needle or applicator.

A is a solid hard rubber handle, through which pass the conducting rods *C C*, connected with the conducting wires at *B*. The rods *C C* being hollow half their length, admit of the rods running from the ivory tip *E* to slide in and out like a telescope, which they are made to do by turning the small wheel *F*. This telescoping of the rods keeps up perfect current connection, and at the same time causes a slow contraction of the wire cautery loop at *E*, the ends of the wire being secured in the ivory clamps *G* on the rods *C C*. The current is regulated or cut off and on from the battery by the screw *D*.

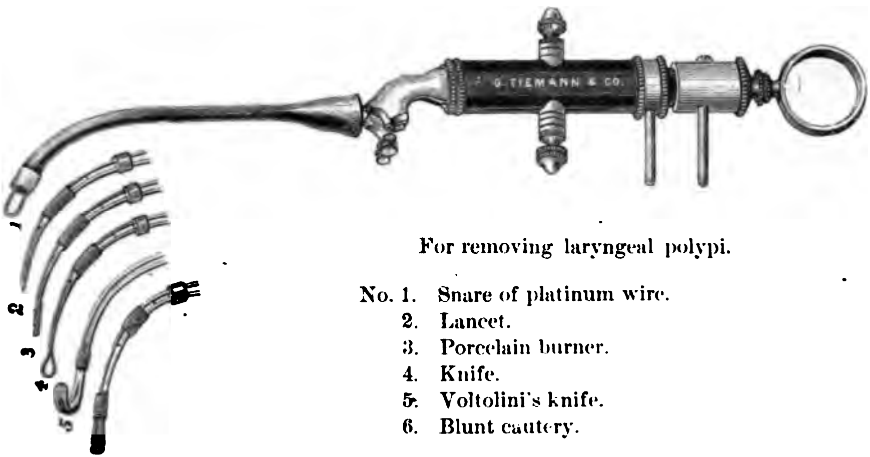
The small illustrations show three of the cautery instruments accompanying the handle, and which are used by withdrawing the tip *E* with its rods and adjusting the individual cautery instruments that may be requisite into the open ends of the rods *C C*.

FIG. 397.—Galvano-Cautery Sling and Platina Wire.



The loop is formed of flexible platinum wire, and may be of any size. By turning the wheel on the handle, the loop is contracted, and, being heated by the battery, cuts the tumor off gradually. The instrument is applied cold, it becomes heated instantly at the moment the circuit is completed, which is done by attaching the wires in the socket at the extremity of the handle.

FIG. 398.—Schröter's Laryngeal Cautery Electrodes.



For removing laryngeal polypi.

No. 1. Snare of platinum wire.
2. Lancet.
3. Porcelain burner.
4. Knife.
5. Voltolini's knife.
6. Blunt cautery.

The Electrode is encased in hard rubber, sea-horse mounted.

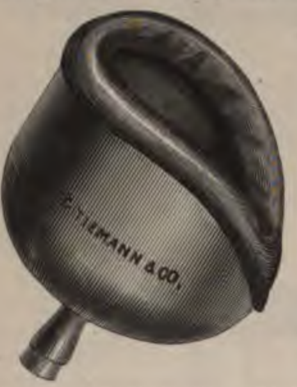
ELECTRO-SURGERY.

The handle of Schröter's Galvano-Cautery Electrode (Fig. 398) is made of hard rubber, provided in front with metallic sockets, isolated, for the reception of the cautery points. One of these connects with the thumb ring on the posterior extremity, the other with the ferule next to the hard rubber; these are isolated by a hard rubber hollow cylinder, and kept apart by a spiral spring. Each of these two ferules, which are movable around their axes, is provided with a pivot for the reception of the sockets of the conducting wires of the battery. To use the No. 1 instrument, platina wire of proper thickness is taken, formed into a sling, and the ends fastened under the heads of the screws of the draw-slide. The thumb is then placed into the ring, the handle held between the index and middle fingers, and, by approximating them, the sling is first tightened on the object, then the ferules are brought into contact, which closes the chain and heats the points instantly. As soon as the tension is relaxed, the chain is broken, and the instrument becomes cold.

The ferules are made movable around their axes for the purpose of allowing the conducting wires to accommodate themselves to taking a downward course, that they may not impede the free manipulation of the instrument. The advantage thus obtained is that it can be used with one hand.

ANÆSTHETIC.

FIG. 399.—Lente's Modified Ether Inhaler.



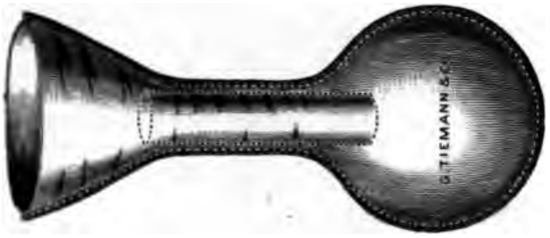
A person thoroughly conversant with the use of ether can succeed quite well, though with a waste of the drug and greater annoyance to the operator and assistants, with an extemporized apparatus, a towel and stiff paper formed into a cone, or a cup sponge enveloped in some impervious material. The great objection, however, to a soft apparatus is that its air space is liable to be, and almost invariably is, much contracted during the struggles of the patient by the pressure exerted upon it either by the administrator or the patient who frequently clutches it and gets it out of shape, and by losing its stiffness from other causes, so that, as the writer has not unfrequently seen, the patient's struggles are mainly caused by having but little chance to breathe either air or ether. The writer formerly contended that, in using the inhaler, the admixture of air should be prevented *as far as possible.* This was owing to the imperfect fitting of the different parts of the instrument, and of the cushion to the face, more air than necessary being thus admitted. With the present apparatus, however, its improved shape, and better fitting cushion, all entrance of air may be prevented, which was never considered desirable. An arrangement is, therefore, made for the admission of more or less air at the apex of the cone. But at the same time, the writer adheres to his original idea that *but little air* should be admitted after the patient *is able to breathe with tolerable facility*—that is, if we desire *rapid* etherization, which is not desirable if the *operation* is to be a protracted one.

The present instrument resembles very much the face-piece of Waldenburg's apparatus for condensing and rarifying air; and the idea of using sheet brass and the india-rubber *air*-cushion was indeed taken from it. But the air-cushion is a failure, as almost all *inflated* things are, without an improvement suggested by the writer, the stuffing of the tube first with hair, so that, when the air leaks out, the cushion will still retain sufficient of its rotundity to fit the face air-tight. When it is to be used, a handkerchief, or piece of sheet lint, &c., is stuffed into the cone, a wire or whalebone arrangement slipped in to keep it off the face, and it is ready. There is a *hole* in the stopper to admit air, and if more air is needed the stopper can be removed. The ether can be poured in the opening at the apex, in case it is undesirable to remove the cone from the face, or throw it on the cloth. Its cleanliness is perfect, as a different piece of cloth may be used each time.

ANÆSTHETIC.

FIG. 400.—Squibb's Ether Inhaler.

(*Extract from Transactions of the New York State Medical Society*, 1871.)


G. TIEMANN & CO.

The apparatus consists of an hourglass shaped muslin bag, which, when laid flat, is about twenty inches long by nine inches wide at the widest part, one end of which is cut off so as to be funnel-shaped, and open to receive the lower part of the face. This funnel-shaped mouth of the bag is of such a size as to admit the nose, mouth, chin and beard of an adult male, and may be adapted to any smaller face by turning it back like a cuff. The muslin of this end of the bag is double, to afford additional obstruction here to the passage of air and ether vapor. The narrow part of the bag is made elongated, so as to receive a tin tube about seven inches long and two inches in diameter. And the bottom of the bag or round end is made of such a size that, when moderately distended, it holds say forty or fifty cubic inches, or more than is necessary for a full inspiration.

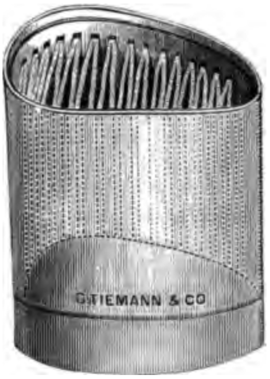
When about to be used, this bag is thoroughly wetted in water, and squeezed so that it does not drip, for the purpose of rendering it only partially pervious to air and ether vapor. It is not certain that an impervious bag would not answer as well, but it would be more difficult to obtain, more expensive, less cleanly, and, perhaps, less safe. The sole object of the tin tube is to keep the narrow portion of the bag distended while in use. A piece of flannel about six and a-half inches wide and eighteen inches long, and a piece of thick blotting paper or blotting card of the same size as the flannel, completes the apparatus. The flannel is laid upon the blotting board, and the two are rolled up together into a roll or spiral which will slip into the tin tube, and when there spring out sufficiently to retain its place loosely. A two ounce graduated measure, and a can or bottle of ether, are all that are now required for the anæsthesia.

The patient is to be anæsthetized by fasting, takes, about fifteen minutes before the time set for the operation, a fluid ounce or a fluid ounce and a-half of brandy or whiskey, if an adult male, or two fluid ounces of wine, if a female. This, upon an empty stomach, will produce slight intoxication in about ten minutes, and the anæsthetic has only to supplement this in order to get quickly through the stage of excitement in many cases. It also renders retching less likely to occur. The patient is then placed quietly on the table, and is advised in a slow, quiet tone, to be composed and perfectly still. He is told that he will soon begin to feel intoxicated, or excited and restless; that this is very much under his control, and that the more he resists it the sooner he will be asleep. If this advice be given with tact and skill, it will be well received, and be of service in a majority of cases. The manipulator is then to wet the bag thoroughly, squeeze out the water until it no longer drips, slip the empty tin tube into its place in the narrow part of the wet bag, and then prepare the charge of ether. This may be done in several ways; but perhaps the best way is to pour the measured quantity of ether into a tumbler, and having allowed the roll of flannel and blotting-board to expand itself to nearly the size for the tin tube, dip first one end and then the other into the ether until the ether is all taken up, and then at once slip the charged roll into its place in the tin tube, the latter being already in its place in the wet bag. Then fold, first one end of the wet bag and then the other, up over the part which holds the tin tube, so that both ends of the tin tube may be closed up by the wet muslin to prevent loss of ether, and then lay it aside, ready for use at any moment. The loss of ether, while thus laying ready, is very small, not over a fluid drachm in half an hour. The quantity of ether for the first charge should vary with the estimated sensibility of the patient. For an adult man one and a-half to two fluid ounces, and for females and sensitive males one to one and a-half fluid ounce is sufficient, if the ether be good; for children, a-half to one fluid ounce. In the anæsthesia of children, and in many exceptional cases, no general rule can be laid down; and, indeed, the circumstances of each case must always modify each application.

ANÆSTHETIC.

FIG. 401.—Allis' Ether Inhaler.

The apparatus consists of a wire frame-work, sufficiently large to cover the lower part of the face. The wires are parallel, and about an eighth of an inch apart. Between the wires, from side to side, a strip of bandage two and one-half inches wide is passed. The instrument is only about four inches long and three inches at its greatest width, and yet it consumes more than three yards of bandage when passed between all the wires. By further reference to the figure it will be seen that each section of the bandage is separate from the adjoining one thus permitting the air to pass freely to both sides of it.



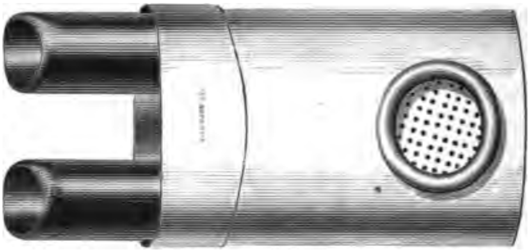
Its advantages are these: The ether being very thoroughly mixed with air, the patient does not suffer from the suffocation usually felt at first inhaling; there is a large evaporating surface. A very much smaller quantity of ether is used, and less escapes into the room than with the usual mode of giving this anæsthetic; the ether can be dropped from a bottle on the distal end of the inhaler, without removing it from the face; the mask is soft and pliable, fitting accurately to the nose and mouth; and, lastly, it is of very simple construction, and cannot get out of order.

Over this frame is drawn a piece of stout sheet india-rubber, or patent leather, which has been stitched together at the edges, so as to make a covering for the frame, projecting over one end two inches, to form the mask, and at the other one inch. The ether is poured on the bandage, which forms a close, well-made artificial sponge.

My mode of using it is as follows: Placing it over the face, I sprinkle on *a few drops* of ether—I mean literally but a few drops. In a few seconds I add a few more drops; and usually in from half a minute to a minute I find that I can drop it more constantly. As soon as I notice *the deep inspirations*, I pour on a small stream, watching carefully least I irritate the larynx, and as soon as I find the patient tolerant of its vapor, I add it in larger quantities, and as rapidly as can be evaporated, and am usually gratified by seeing my patient pass *quietly* under its influence from three to ten minutes.

The instrument is especially serviceable when a prolonged use of ether is required. A slight *dripping* will suffice to prolong the effect, and economy of ether, though not a great desideratum, is still worthy of consideration.

FIG. 402.—Chisolm's Pocket Ether Inhaler.

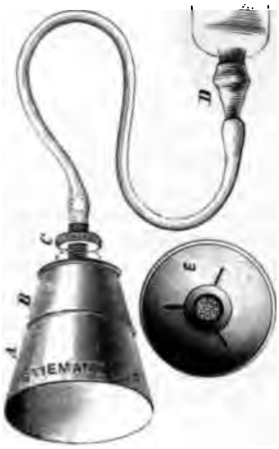


ANÆSTHETIC.

FIG. 403.—Cheatham's Ether Inhaler.

It operates by Lente's method of replenishing the evaporating surface without removing it from the face.

A patient cannot be anæsthetized as quickly with it as with a common cone, but with much less ether. It economizes by not having to remove it from the face to replenish it, and by this you avoid the disagreeable effect of having the ether that would otherwise escape permeating every part of the house in which it is used. Its convenience of application is also quite obvious. The ease with which the face-piece (being paper) can be removed immediately after use and thrown away is, I think, a strong recommendation in its favor.



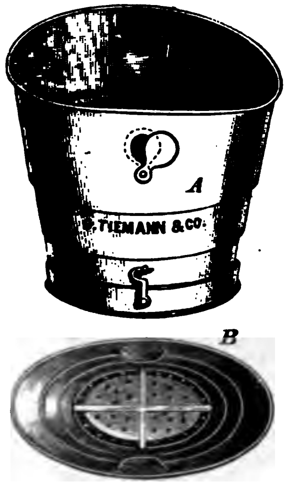
This apparatus consists of a tin cup (*A*), holding in the inside a sponge as an evaporating surface, and connected from the top by rubber tubing with the bottle that contains the anæsthetic. This tube has attached to its distal end a cap (*D*) that will fit over the neck of almost any bottle.

Make a cone of paper, cut the top off, so that when tin cup (*A*) is slipped inside, the top of the cup will protrude a line or two from the top of cone.

Place tin cup (*B*) over both cup and cone, screw it down tightly by means of nut (*C*), and you have the cone held tightly. Attach tube to top of cup, and the apparatus is complete. The smaller the cone the quicker you can get the patient under the influence of the anæsthetic. I would suggest, after the cone is in position the bottom should be trimmed, leaving a part of it—we shall call it the back part—that is intended to go over the chin, three inches longer than the cup, and sloping forwards and upwards leaving the front part, intended to go over the nose, about an inch longer than the cup. *E* gives an inside view of cup (*A*).

FIG. 404.—Speirs George's Inhaler for Anæsthetics.

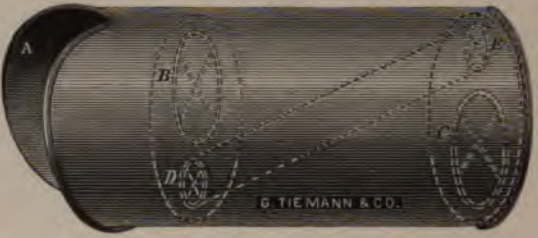
The instrument consists of an oblong conical cylinder, which folds upon itself. Within the cylinder and near the top of the instrument, when extended, is a pocket, in which rests the flannel or sponge to receive the anæsthetic used. The pocket is so constructed that a continuous column of air can pass between it and the sides of the inhaler proper. The top and sides of the inhaler contain slides, by means of which more or less air can be admitted or excluded as required during the administration of any anæsthetic. The top of the pocket is concave and perforated. The preparation used can be poured through the top, and the anæsthetic agent, falling upon the concave surface of the instrument, passes through the perforations alluded to, and is taken up by the sponge or flannel within the apparatus, thus enabling the practitioner to replenish the instrument, when required, without removing it from the face of the patient.



The interior of the instrument, when closed (which looks like a cup), contains a bottle, which can be kept filled with chloroform, ready for immediate use as required—as in cases of convulsions, diagnosis, obstetric practice, &c. Within the box containing the apparatus, is a flannel sack. This can be pulled over the instrument to keep it warm, when from long and continued use, and consequent evaporation of the anæsthetic, it becomes cold. Whenever desired, the instrument can be instantly removed from the face of the patient; and when not in immediate use, the slides can be closed and the apparatus placed upon a pillow. The pillow, being soft, conforms to the bottom of the instrument, retaining the vapor within, to be again used from time to time as required.

ANÆSTHETIC.

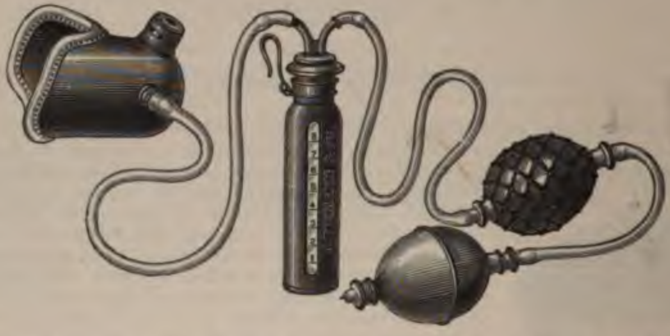
FIG. 405.—Morton's Ether Inhaler.



It is a simple cylinder of leather, of which *A* represents the face piece, with thinned and pliable edges to admit of close adjustment. *B* is an inlet valve, permitting of inspiration through the ether-chamber, but closing against expiration. *D* is the entrance orifice of a metal tube leading through the wool-packed ether-chamber to *E*, the exit valve, which closes with inspiration—opening with expiration ; this tube is for the purpose of collecting the heat of the exhaled breath and communicating it to the surrounding wool, thus favoring rapid evaporation of the ether with which the wool is saturated. *C* is the opening for introducing the ether, one-half a drachm, or even less, of which is sufficient to begin with.

The Inhaler may be withdrawn from time to time, to avoid irritating the larynx, until the patient gets accustomed to the vapor ; then ether may be added, as the case requires, and the patient will be found to pass quietly under its influence.

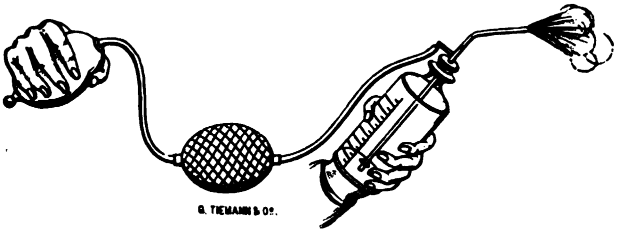
FIG. 406.—Junker's Methylene Inhaler.



The apparatus for using Methylene as an anæsthetic consists of a face-piece to cover the nose and mouth, having an arrangement to admit more or less air at the apex. This connects by means of rubber hose to one end of a double branched metal tube running through a rubber stopper ; the other branch of the metal tube connects by rubber hose to a set of air bags with valves, such as are used for Richardson's ether-spray. The stopper fits tightly a glass graduated bottle of 15 drachms capacity. This has a hook attached to its neck by which it may be held in a button-hole of the operator's coat or vest. To guard against being easily broken, as well as for protecting the methylene against the action of light, it is covered with leather, preferably of yellow or light blue color, leaving only the graduated scale free for observation. When the air-bag is worked, the methylene in the bottle is agitated and vapor formed, which may be inhaled by the patient in the same way as usual with other inhalers. It has been used by Drs. Junker, Richardson, and others with more or less success.

ANÆSTHETIC.

FIG. 407.—Richardson's Atomizer, for inhalation of local anæsthesia.



After filling the bottle two-thirds full with the solution, operate the end ball briskly; this will extend the netted ball and force a current of air into the cavity of the silver tube. This column of air, being disproportionately large compared with the aperture of the tube, becomes compressed and exerts, *first:* an influence upon the surface of the fluid (which is forced by it into the capillary tube; *secondly:* a pressure upwards, escaping through the orifice at its tip. This continued upward current of air divides into spray the drops collected at the extremity of the capillary tube. The force with which this spray can be thrown is surprising. The jet is steady, there being a pretty uniform pressure kept up by the regulating power of the netted bag, which, by virtue of its elasticity, compresses the air in it during the intervals of manipulation upon the hand ball. *Our tubes, being made of silver,* do not form verdigris (a serious objection to instruments made of inferior metals). *This Atomizer is also the best douche for bathing sensitive eyes,* inflamed sores, &c. Suitable forms made for the eustachian tubes, uterus, urethra, posterior nares, or any part of the body accessible to instruments.

If the capillary tube should become obstructed, clear it with fine soft wire.

ANTISEPTIC SURGERY.

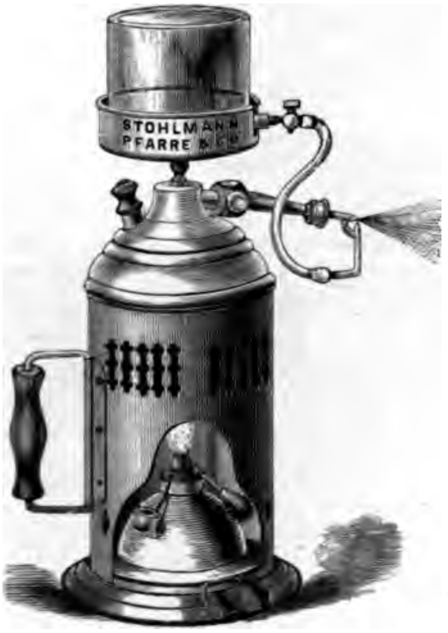


FIG. 408.—Hank's Antiseptic Spray.

(*Extracted from the Medical Record of January 13th,* 1877, *and American Journal of Obstetrics, April,* 1877, "*Transactions of New York Obstetrical Society.*")

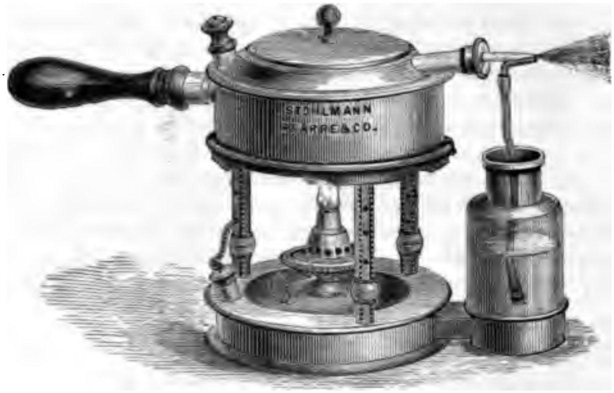
At my suggestion and direction, Stohlmann, Pfarre & Co., No. 107 East 28th Street, have constructed the apparatus represented in the accompanying cut. The stand, boiler, and lamp correspond in design to the common atomizer, now so generally used for inhalation purposes, but are much larger. The open glass vessel for holding the antiseptic fluid has a capacity of one pint, and is held in position over the boiler in a shallow metal cup. The latter is made to move forward and backward by means of a thumb-screw, which is attached to an erect rod, fastened at the base of the apparatus. The rod in the cut is necessarily concealed from view. There is a small stop-cock arrangement low down at the side of the glass vessel, thus regulating the amount of antiseptic fluid which flows downward to the atomizing points. The long metal arm, into which is fastened in the usual manner the glass or metal spray-producer, is attached to the boiler by a kind of

ANTISEPTIC SURGERY.

elbow-joint, thus enabling the spray to be projected forward at any angle. The alcohol lamp has a large tube for the wick, and over this is a second tube which slides up and down by means of a ratchet. The handle of the ratchet is seen in the cut. It readily controls the size of the blaze, the degree of heat, and the amount of steam produced. Great care should be exercised in selecting a suitable atomizing point. With a proper point a coarse or fine spray may be produced, according to the amount of antiseptic fluid admitted through the stop-cock. The force of the spray will depend upon the *blaze*, and the consequent amount of steam ; and the angle of the arm will regulate its direction.

The apparatus thus constructed will supply a suitable spray for two hours' operation, as the antiseptic fluid can be replenished as required. I claim for it its portability, small size, safety, durability, and cheapness. It contrasts favorably in every way with the Lister or Sass aparatus.

Fig. 409.—Weir's Antiseptic Spray.



(The following extract is taken from a paper, read before the New York County Medical Society, on "The Antiseptic Treatment of Wounds," by Dr. R. F. Weir, *of this city.)*

"The best spray-producer is that devised by Lister himself. It is, however, quite costly, ranging in price from fifty to seventy-five dollars, and it was to meet this objection that the one before you has been constructed. With its diminished cost some of the improvements of Mr. Lister's lamp have been sacrificed. It is, however, essentially the same. Its hollow wick, readily raised or lowered, affords a great and controllable heat. The spray-tube is in this apparatus fixed, an objection which in the majority of cases is of no moment. It will supply spray for over two hours. It therefore requires only that the boiler—containing twenty-two ounces—should be, as well as the lamp, full at the beginning of the operation; and, with this precaution, it has been found practicable to dispense with the expensive and tell-tale windows of glass belonging to the original imported instrument. The accompanying woodcut gives a good reprentation of this lamp."

Further directions for its use have been supplied us by Dr. Weir, viz.:

"The lamp should be filled with alcohol at the beginning of an operation and the stopper removed from the side opening when the wick is lighted. Prior to filling the boiler with water (preferably hot) it is desirable to ascertain that the spray-tube is free by sucking or blowing through it, and also that the escape-valve works properly. If the latter is stiff, a drop of oil or glycerine should be introduced from above. When the boiler is yet quite full, the spray-tube should not be depressed very much, in order to avoid the exit of hot water. If the spray-tube is too coarse, the end of the rubber tubing immersed in the carbolic acid solution may be plugged with cotton or sponge, or the tubing itself may be narrowed by a thread loosely tied around it. Should the spray-tube become choked during an operation, a small wire, such as comes with a hypodermic syringe, can be resorted to, to clear it."

ANTISEPTIC SURGERY.

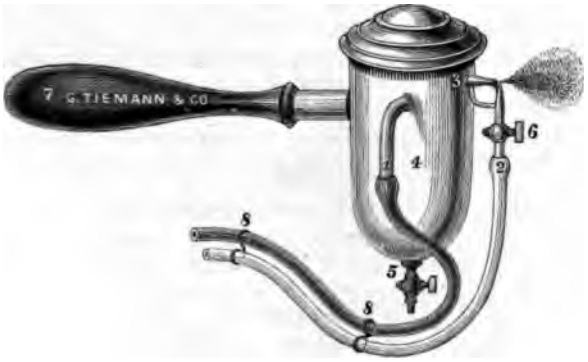


FIG. 410.
Heuel's Antiseptic Spray.

(Extracted from the Medical Record, May 11th, 1878.)

The apparatus represented in the accompanying cut is a modified apparatus for use in antiseptic surgery. The modification consists in the addition of two flexible rubber tubes and a steam-chest to the ordinary atomizing apparatus used for inhalation purposes, and may be readily attached by the physician himself to any of the atomizers now used. In the annexed figure, 4 is a steam-chest, to the upper part of which is soldered, at 3, the ordinary metal atomizing tubes, and at the side a tube, 1, to which is to be attached a piece of flexible rubber steam tubing, for carrying steam from a boiler; opposite 3 is a wooden handle, 7, for holding the apparatus, and at the lowest part of the chest is a stop-cock, 5. The rubber tube, 2, delivering the medicated fluid, is also furnished with a stop-cock, 6, so that the amount of fluid atomized may be varied at pleasure. The steam and water tubes, 1 and 2, are held together by figure-of-eight pieces of wire, so that they may be handled as if they were but one tube.

As is readily seen, the length of these tubes may be varied to suit the occasion, only remembering that the longer the tubes, the greater the pressure of steam required, and the higher must the vessel containing the medicated fluid be placed, in order to deliver it at the opening of the tube, 2. The steam, which condenses in the tubing and steam-chest, is allowed to escape, when necessary, through the stop-cock, 5, so that the patient is not scalded by a jet of hot water.

The use of long flexible tubes, combined with the steam-chest, permits the boiler of this apparatus to be placed at such a distance that all danger of explosion, when ether is used, is avoided, as well as all interference with the operator. The force, amount and direction of the spray can also be varied at pleasure. In the ordinary atomizers the whole apparatus must be placed unpleasantly close to the patient; in this a very light portion is readily supported and directed by the hand without fatigue.

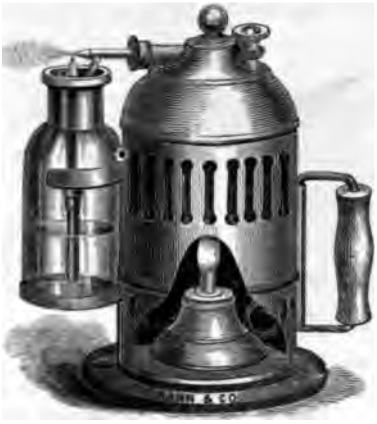


FIG. 411.—Little's Antiseptic Spray.

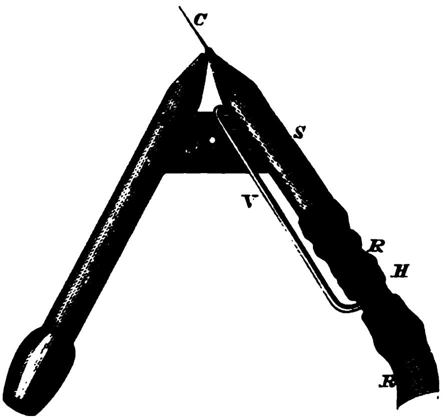
This is a Tiemann's Steam Inhaler, altered at my suggestion, so as to give a good spray. It answers well for dressing wounds. For large operations, it is necessary to use the large spray apparatus, this small one answering well for subsequent dressings. Mr. Lister uses a still smaller one for this purpose, which he carries in the pocket. This small one will work for over an hour. The best instrument is the one which makes the finest spray, it wetting and numbing the hands but little, and causing the fluid to last longer, while producing as good an effect upon the tissues. The spray-tube, in order to accomplish this, should be of small calibre. Always be careful to see that the safety-valve is right before you use it.

ANTISEPTIC SURGERY.

FIG. 412.—The new Safety Tube-Cleaner and Plug.

(PATENT APPLIED FOR.)

L, is the steam tube, *S*, the suction or solution tube ; *H*, is a supplementary tube to which is attached the Tube-Cleaner, *C*, and the catch, *V*; *R*, *R*, are rubber tubes, the upper one serving as a spring to keep the Tube-Cleaner out of the orifice. The catch, *V*, is made to hook over the brace, *B*, as shown, by pushing up the tube, *H*, and giving it a slight rotation, when the point of *C* is held in the orifice as a plug. Without such rotation it moves up and down without catching.



This important addition to the steam atomizer, whereby much annoyance is avoided, and, in antiseptic surgery, additional safety secured, consists of a nickel-plated steel wire contained *within* the suction or solution tube and which, when pushed forward, effectually and instantly removes any obstruction from the orifice.

This cleaning *out* of the obstruction instead of forcing it back into the tube, to again come up and stop the flow, needs no commendation from us.

The elasticity of the short rubber connecting tube always keeps the tube-cleaner out of the orifice except when pushed forward, but by a special device (the hook *V*) it may be held within the orifice to act as a plug or stop-cock to prevent waste of the solution.

It is always desirable to have the steam jet in full play before commencing an operation, and, by pushing forward the Tube-Cleaner and securing it in the orifice, the full heat of the flame may be maintained without wasting solution or covering everything in the vicinity with spray.

Theoretically a strainer will keep the tube clear, but a fragment of the strainer itself or an aggregation of particles in a filtered solution may at any moment intervene to defeat the efforts of the most skilful operator by shutting off or very materially diminishing the spray. Any such mishap can not of course be repaired until too late.

Though less imperatively demanded in atomizers for general use it will be found to be very convenient and useful ; but in antiseptic surgery so much depends upon the constancy of the spray, it is presumed that this very simple though effective appliance will be highly appreciated by surgeons.

◆

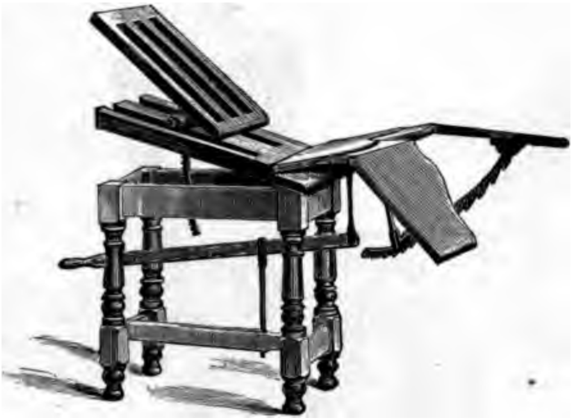
Materials for the Antiseptic Treatment of Wounds.

Lister's Antiseptic Gauze, in 6 yard pieces.
Lister's Silk Protective, by the yard.
McIntosh Waterproof Cloth, by the yard.
Oiled Muslin, by the yard.
Jaconet, Carbolized.
Lister's Carbolized Catgut, in bottles.
Carbolized Cotton.
Borated Cotton.
Van Brun's Wound-Dressing Cotton.
Dennison's Absorbent Cotton.
Animal Ligature, Carbolized, Dry.

F. A. Stohlmann. **Edward Pfarre.**

OPERATING FURNITURE.

FIG. 413.—McIlroy's Surgical Operating Table.



Cushion Upholstered in Leather, Irons Nickel-Plated............. $125.

It is in use in many hospitals, both in this country and Europe. It will raise one leg or both ; it will raise the head, put the patient back or forward ; it will spread the limbs and raise the pelvis for lithotomy, or any operation on the perinæum. For any important case in surgery it is a convenience to the operator and facilitates the operation.

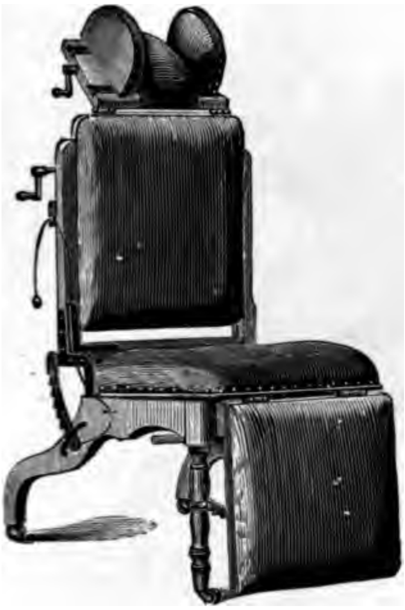


FIG. 414.—Knapp's Oculist's Operating Chair.

Designed by Prof. H. Knapp. It will put the head in any position ; it will, by means of two jaws, hold the head steady ; the back will rise to suit the height ; it will lower down the back or place at any incline ; the seat will rise and the back will lower to operate on a child ; foot-piece rises up and draws out to support the limbs.

Upholstered in Leather, Irons Nickel-Plated .... $70.

OPERATING FURNITURE.

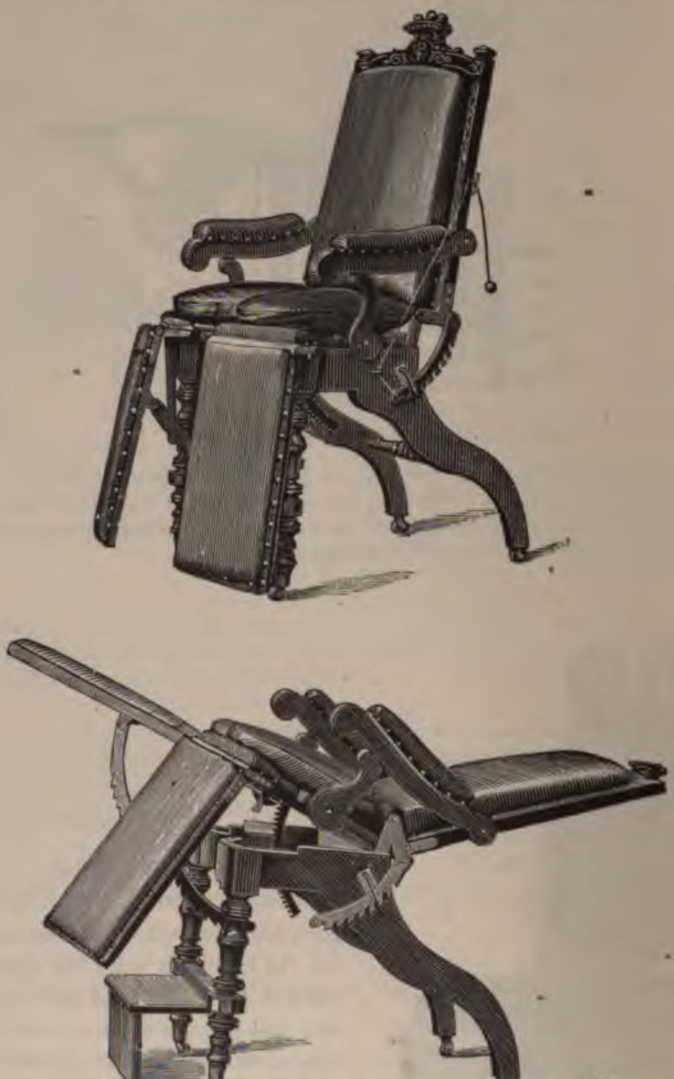


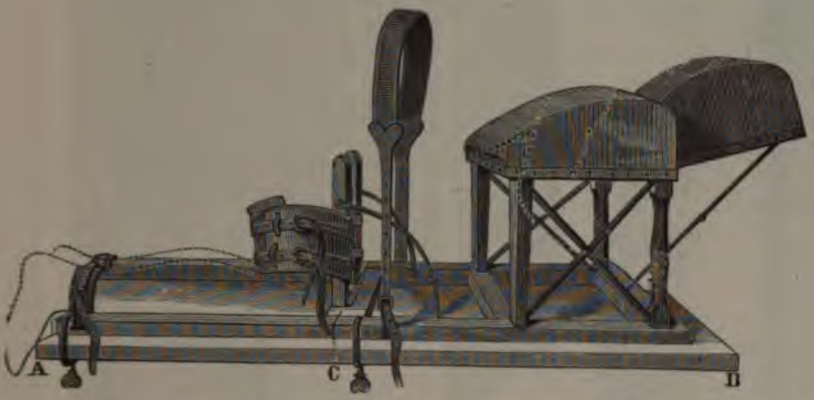
FIG. 415.—McIlroy's Speculum or Operating Chair.

Price .... $70.

A convenient chair for operations on the perinæum. It will raise one leg or both; it will lower the back to any incline; it will spread the limbs and raise the pelvis; it is perfect in its movements and every part effectual. It stands sufficiently high for the convenience of the operator. The Chair is made of black walnut, covered in leather, all irons nickel-plated, the seat having loose cushion which can be removed at will.

OPERATING FURNITURE.

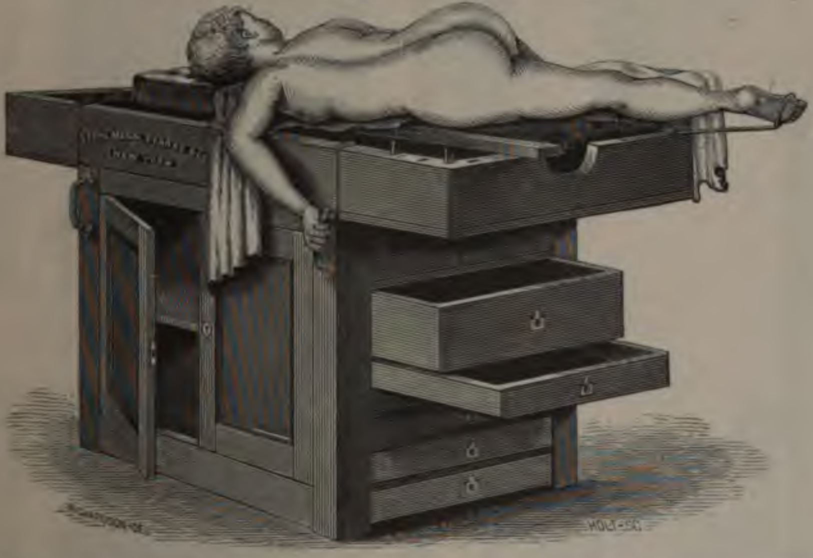
FIG. 416. Bozeman's Operating Chair.



For placing and securing the patient in the knee-elbow position for the operation of Vesico Vaginal Fistula, Vaginal Ovaritomy, &c.

This apparatus not only completely secures the patient in this position, by straps and braces, but renders it perfectly comfortable for any length of time, and also favors the administration of an anæsthetic.

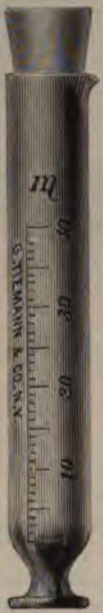
FIG. 417. Foster's Gynæcological Operating Table.



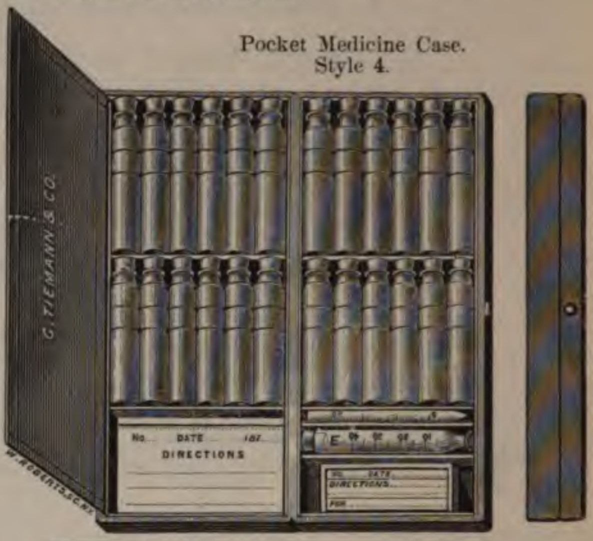
When all the drawers and doors are closed it may be used as an office table or writing desk, and will not take up much room. The patient may be put in any position required for examination or operation, and kept comfortable.

The drawers afford ample room to keep a complete armamentarium and have it handily arranged during an operation.

FIG. 418.—Fuller's Pocket Medicine Cases, designed for Squibb's Standard Pharmaceutical Preparations.

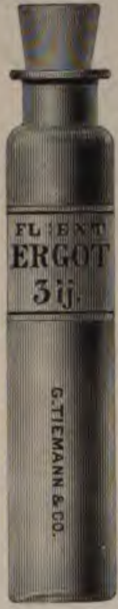


No. 2.—Minim Measure.

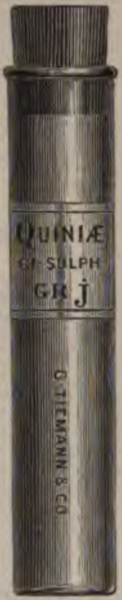

G.TIEMANN & CO.
No. DATE 187
DIRECTIONS
W.ROBERTS.SC.

Pocket Medicine Case.
Style 4.

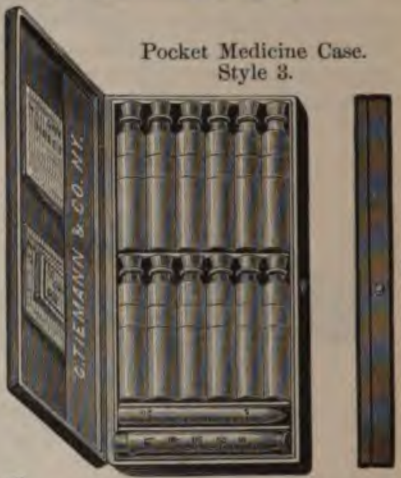
Size, 9 × 3¾ × 1⅜ in.



No. 3.—Pocket Case Vial.

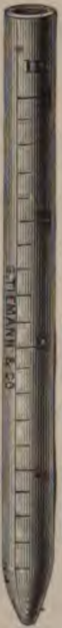


No. 4.—Pocket Case Vial, for Tablets.

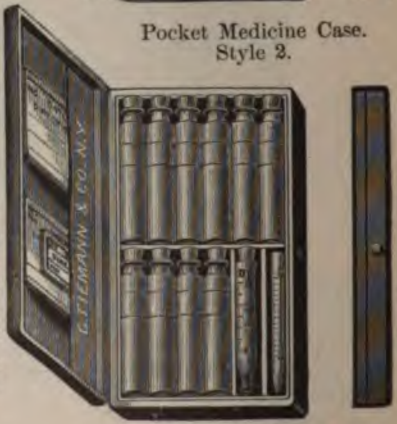

G.TIEMANN & CO. N.Y.

Pocket Medicine Case.
Style 3.

Size, 7⅞ × 3¾ × ¾ in.

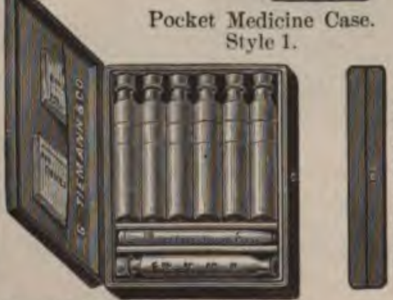

G.TIEMANN & CO.

No. 1.—Minim Pipette.


G.TIEMANN & CO. N.Y.

Pocket Medicine Case.
Style 2.

Size, 6¾ × 3¾ × ¾ in.


G.TIEMANN & CO.

Pocket Medicine Case.
Style 1.

Size, 4⅝ × 3¾ × ¾ in.

F. A. Stohlmann. **Edward Pfarre.**

On Pocket Medicine Cases, by Robert M. Fuller, M. D., New York. (FIG. 418.)

"The frequent need which physicians experience of having at hand, in night calls and emergencies, the necessary means of affording prompt relief, has suggested the designing of a pocket case which shall possess the following important features essential to render it of practical utility at the bedside, viz.: accuracy in dispensing, the ready and proper labeling of the medicines dispensed, as well as of the vials in the pocket case, and lastly, compactness and durability of case.

ACCURACY IN DISPENSING.

For Standard Liquid Preparations, such as those manufactured by E. R. Squibb, M. D., of Brooklyn, N. Y., accurate dispensing can be secured by the use of a minim pipette or minim measure. The former may prove more convenient when dispensing 5, 10, or 15 minims, and the latter when dispensing 20, 30, or 40 minims.

When it is desirable to dispense powders, it will be found that the so-called compressed pills, (or compressed powders,) such as Pil: Calomel, gr. V., or Pil: Morphiæ sulphatis, gr. ¼, manufactured by Wyeth & Bro., of Philadelphia, can be easily reduced to powder by gentle pressure and subdivided if desired.

When pills are used, medium-sized ones will be best suited to the vials.

READY AND PROPER LABELING OF MEDICINES DISPENSED, AS WELL AS OF THE VIALS IN THE POCKET CASE.

By writing the date and directions plainly upon an adhesive label—which may also be inscribed with the number and name of the patient—the latter can readily be attached to the covered glass containing the medicine dispensed, thus preventing errors by supplying a complete prescription.

Physicians who preserve a copy of their prescriptions, can also retain copies of those thus given.

The envelopes for powders or pills being also printed with number, date and directions, copies of them can be preserved with equal facility.

A double sheet of adhesive labels, eighty-eight of which are printed and twenty-two blank, should accompany each case.

COMPACTNESS AND DURABILITY OF CASE.

The style, size and finish of a pocket case is a matter of convenience or taste. In this instance, the "box" case has been selected, and its *thickness* reduced to the *minimum*, so that it is not only neat in appearance, but also convenient to carry on all occasions. From its construction it would seem to be the most durable, the easiest opened and closed, and best calculated to protect its contents from injury. It is encased in durable leather and provided with the finest kind of spring-catch.

Lastly, the size of the vial selected, a medium ʒij, renders it well adapted for liquids, pills, or powders, and of sufficient size for ordinary occasions. If, however, larger quantities are required, duplicate vials might prove preferable to some of double size.

Any number of vials being once labeled, selection can be made from them as desired, and the case re-arranged at pleasure."

F. A. Stohlmann. **Edward Pfarre.**

Adhesive Vial Labels for Fuller's Pocket Medicine Cases.

The sheet of labels previously referred to, embraces the appended list of Squibb's Preparations, from which each physician can readily select those medicines which would prove most useful in cases of emergency.

Fluid Extract of—
- Aconite Root.
- American Hellebore, or Veratrum Viride.
- Aromatic Powder.
- Belladonna Leaf.
- Belladonna Root.
- Buckthorn Bark.
- Digitalis.
- Ergot.
- Gelsemium.
- Indian Hemp.
- Ipecacuanha.
- Nux Vomica.
- Podophyllum.
- Rhatany.
- Rhubarb.
- Senna Compound.
- Valerian.

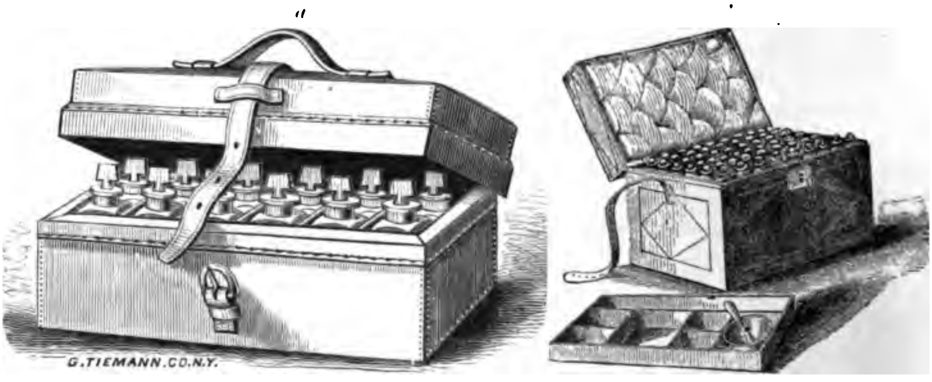
(1 minim of each of above represents 1 grain.)

Solution of—
- Chloral, 1 grain to the minim.
- Sulphate of Morphia, Magendie's, $\frac{1}{30}$ grain to the minim.
- Sulphate of Atropia, 4 grains to the fluid ounce.
- Sulphate of Quinia, $\frac{1}{8}$ grain to the minim.
- Sulphate of Zinc, 10 grains to 30 minims.
- Subsulphate of Iron.

Compound Tincture of Ipecacuanha, each minim equal to 1 grain of Dover's Powder.
Deodorized Tincture of Opium.
Compound Solution of Opium.
Compound Tincture of Opium, or Diarrhœa Mixture.
Compound Spirit of Ether, or Hoffman's Anodyne.
Purified Chloroform.
Tincture of Chloride of Iron.
Pills of Aloes and Mastic, Lady Webster's Dinner Pills.
Pills of Arsenious Acid, $\frac{1}{30}$ grain in each pill.
Pills of Opium, 1 grain each.
Pills of Sulphate of Quinia, 3 grains each.
Pills of Sulphate of Quinia, 2 grains each.
Pills of Sulphate of Quinia, 1 grain each.
Compound Cathartic Pills.
Mercurial, or Blue Pills.
Podophyllum Pills.
Compound Pills of Scammony, or Triplex Pills.
Nitrite of Amyl.
Calomel.
Mercury with Chalk.

◆◆◆

FIG. 419.—*a*, *b*. Medicine Chests.



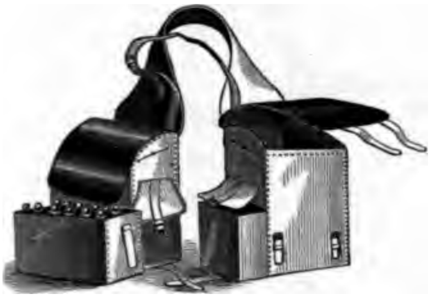
Medicine Chests made of the best Russet Leather.

No. 1 contains 2 Jars and 20 Vials.
" 2 " 3 " 28 "
" 3 " 4 " 35 "
" 4 " 12 1 oz. Vials, glass stoppers.

F. A. Stohlmann. **Edward Pfarre.**

MEDICAL SADDLE BAGS.

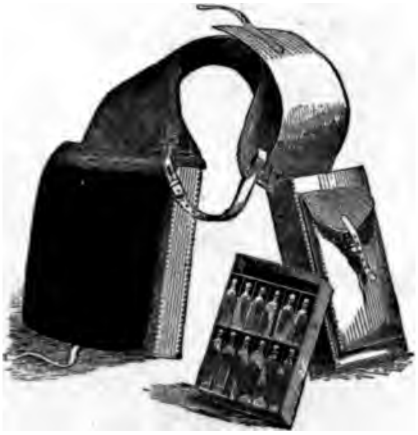
FIG. 420. Saddle Bag.



Made of the best russet leather, patent leather covers, space for instruments under the cover, walnut drawers in the lower part.

16 1½ oz. Vials, Glass Stoppers.
20 1½ " " " "
24 1½ " " " "

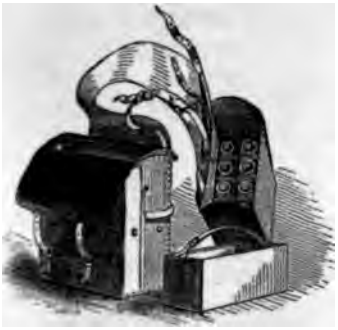
FIG. 421. Saddle Bag.



Flat Pattern.

16 1½ oz. Vials, Glass Stoppers, Russet Leather, Patent Leather Flaps.
20 1½ oz. Vials, Glass Stoppers, Russet Leather, Patent Leather Flaps.
24 1½ oz. Vials, Glass Stoppers, Russet Leather, Patent Leather Flaps.

FIG. 422. Saddle Bag.

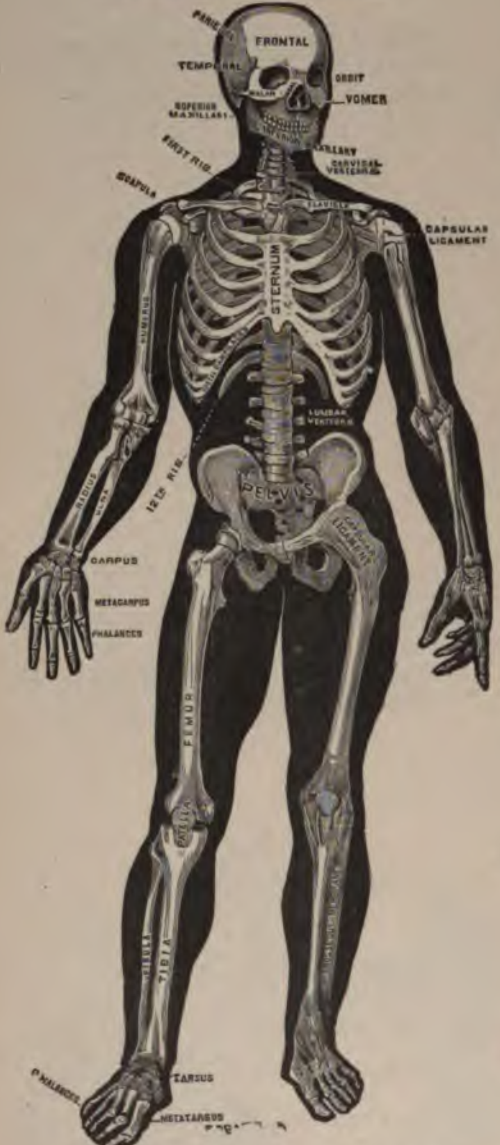


Box Pattern, with Trays to lift out.

16 1 oz. Ground Stop Bottles.
20 1 " " " "
24 1 " " " "

OSTEOLOGICAL.

FIG. 423. Human Skeleton.



SKELETONS.

Articulated by means of brass screws
Grades: 1, 2, 3.

SKULLS.

Plain and disarticulated.

FEMALE PELVES.

Without ligaments.
With ligaments.

FEET.

Strung on catgut.

HANDS.

Strung on catgut.

BRASS SCREWS AND HINGES.

For joining skeletons.

AUZOUX'S ANATOMICAL MODELS.

Imported to order.

ASPIRATORS.

A descriptive pamphlet on Aspirators may be had on application, together with directions how to keep them in order.

FIG. 424. Dieulafoy's Aspirator.

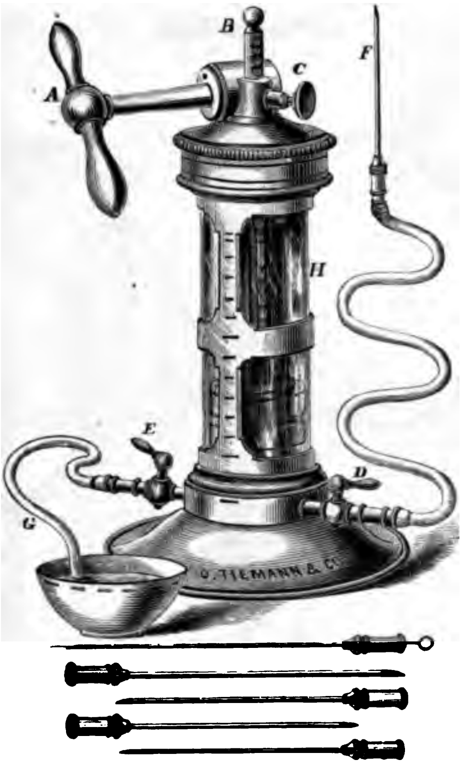
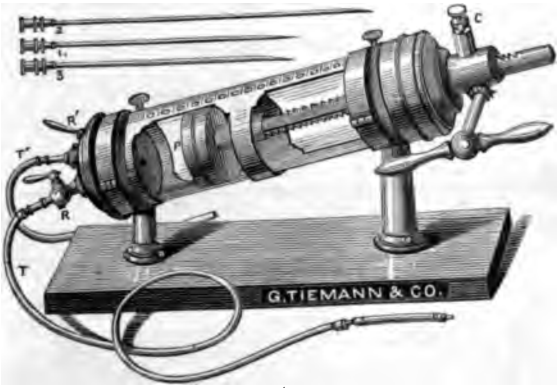


FIG. 425. Hospital Aspirator.



The largest Aspirator in general use. Its arrangement is such as to leave both hands of the operator free to perform any manipulation which may be found necessary. The rack-and-pinion movement, by increasing the power, admits of the piston being more tightly packed, and hence a more perfect vacuum is obtained for exhausting, and enables to wash out the cyst, without the necessity for removing the needle. The syringe and needles are exquisitely fitted and finished.

ASPIRATORS.

A descriptive pamphlet on Aspirators may be had on application.

FIG. 426. Steurer's Aspirator.

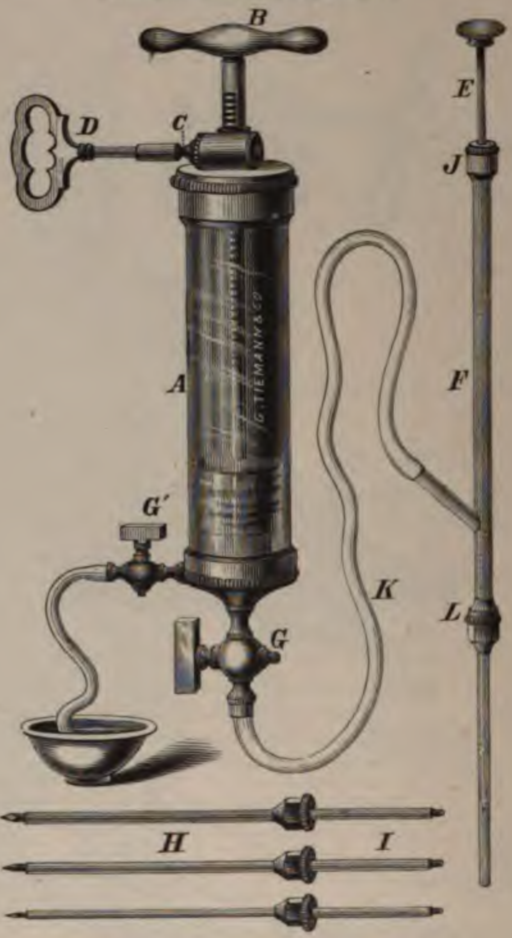
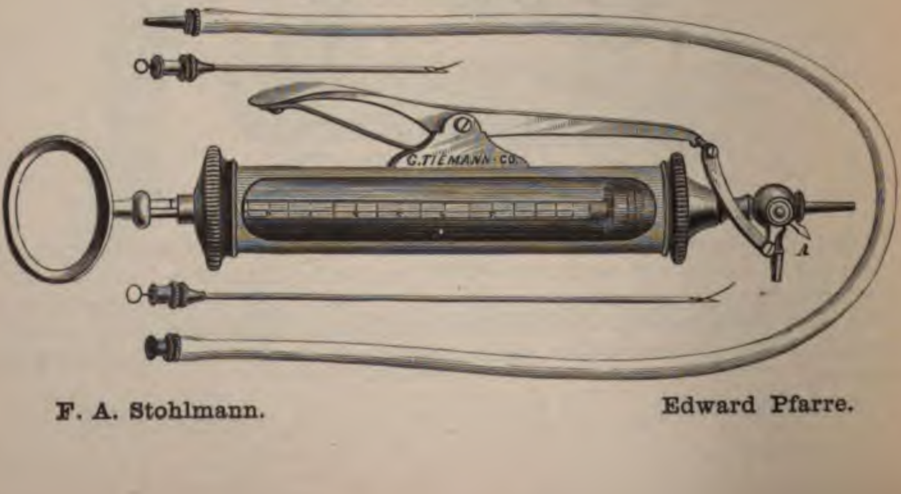


FIG. 427. Emmett's Aspirator.



ASPIRATORS.

A descriptive pamphlet on Aspirators may be had on application.

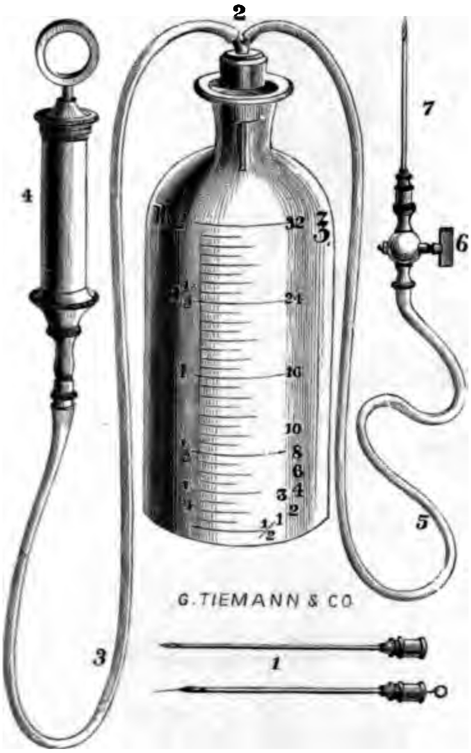


FIG. 428. Tiemann & Co.'s Aspirator.

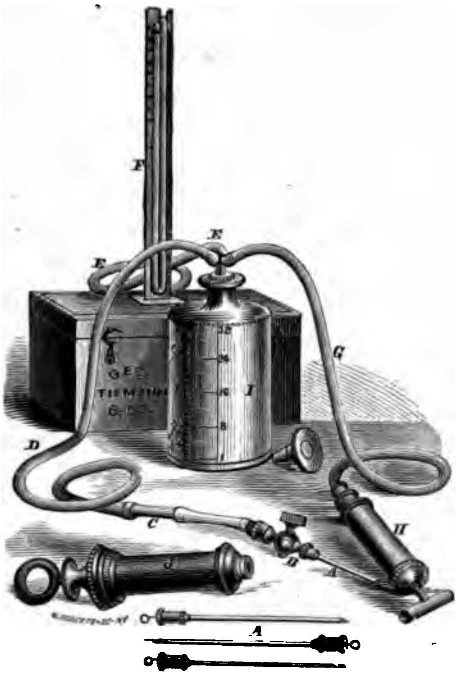
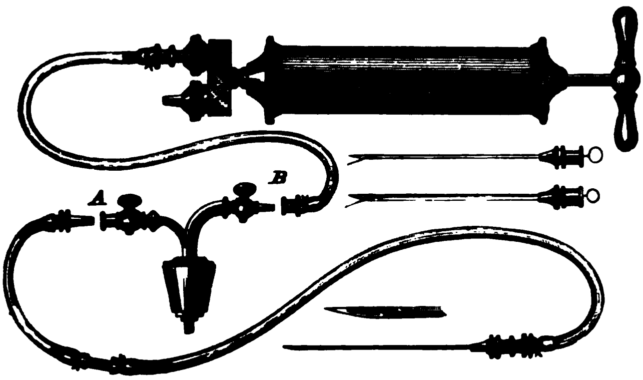


FIG. 429. Higgins' Aspirator and Injector.

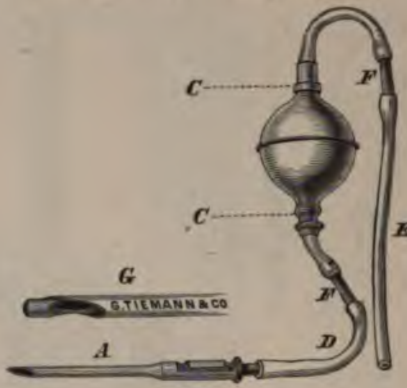
FIG. 430. Codman's Aspirator and Injector.



ASPIRATORS.

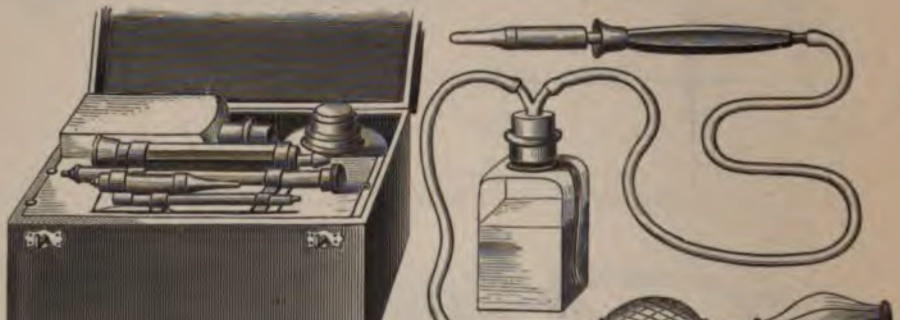
Descriptive pamphlet may be had on application.

FIG. 431. Fitch's Handy Aspirator.



THERMO-CAUTERY.

FIG. 432. Paquelin's Thermo-Cautery.



The apparatus consists of a hollow handle, insulated with wood, to protect the hands from the heat. It is furnished with three movable hollow platinum cauteries; into these, after they have been heated to blackness in a flame of a spirit lamp, a blast of benzine vapor is introduced by means of a Richardson's spray bellows, which at once rises to and maintains them at a state of vivid incandescence. The heat thus produced can be kept up for an indefinite time by slightly compressing the bellows occasionally. The apparatus, in a morocco case, imported directly from the manufacturer in Paris $50.00

PART II.

POLITZER'S ACOUMETRE.

Please do NOT MUTILATE this Book.

In ordering, merely state the Part of the Armamentarium, the Number of the Figure, and the Name of the article desired.

Instruments not mentioned in our Price List will be furnished at the lowest market rates.

When GOODS FOR REPAIR are directed to us, the Owner's Name and Address should accompany them. This will enable us to return them to the proper place and person.

Parties finding it convenient to order through dealers are requested to insist upon receiving our manufacture, as otherwise inferior goods are frequently substituted.

All instruments of our make have our name stamped upon them.

PART II.

GEO. TIEMANN & CO.'S SURGICAL INSTRUMENTS,

No. 67 Chatham Street;

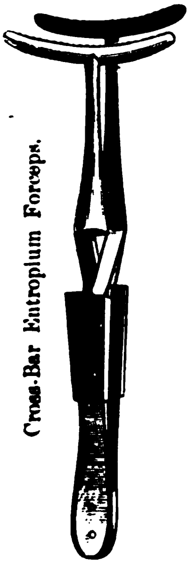
Branch Store, No. 107 East Twenty-eighth Street,

NEW-YORK.

EYE INSTRUMENTS.

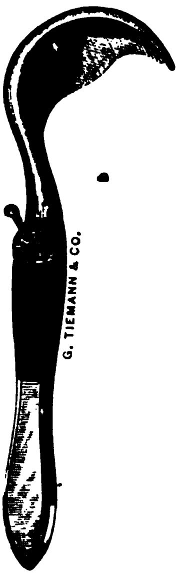
INSTRUMENTS FOR OPERATING ON THE LIDS AND LACHRYMAL DUCTS.

FIG. 1.



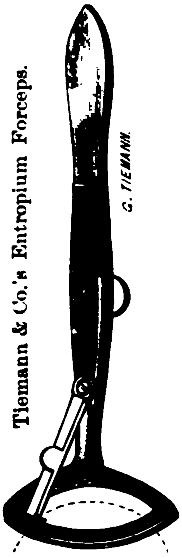
Cross-Bar Entropium Forceps.

FIG. 2.



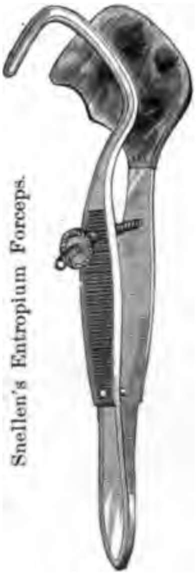
Laurence's Eye-lid Tourniquet.

FIG. 3.



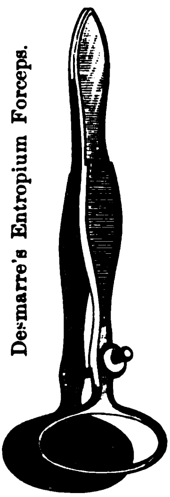
Tiemann & Co.'s Entropium Forceps.

FIG. 4.



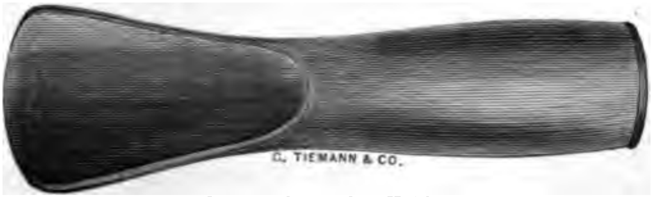
Snellen's Entropium Forceps.

FIG. 5.



Desmarre's Entropium Forceps.

FIG. 6.



Jæger's Plate Lid-Holder.

EYE INSTRUMENTS.

INSTRUMENTS FOR OPERATING ON THE LIDS AND LACHRYMAL DUCTS.

FIG. 7. Henry's Depilating Forceps.

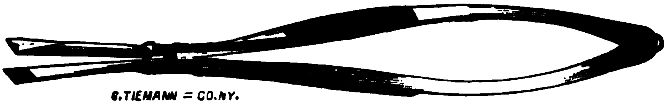
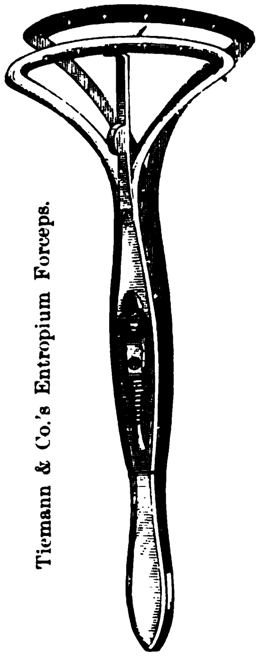


FIG. 8.



Tiemann & Co.'s Entropium Forceps.

FIG. 9. Cilia Forceps.

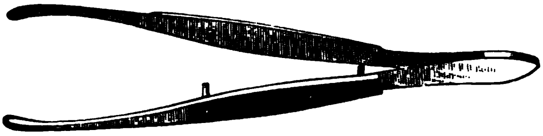


FIG. 10. Ratti's Trichiasis Forceps.

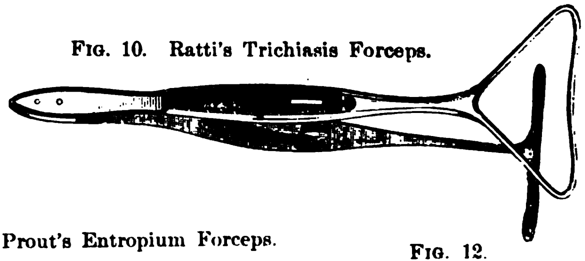


FIG 11. Prout's Entropium Forceps.

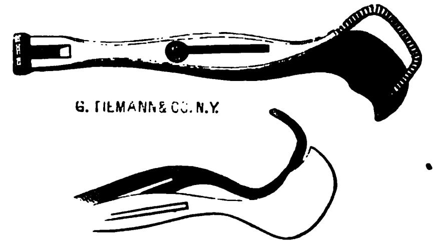
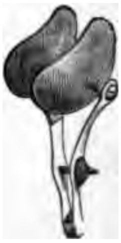
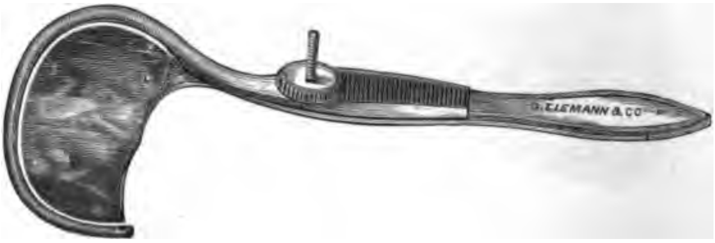


FIG. 12.



Stoke's Eyelid Compressor.

FIG. 13. Knapp's Entropium Forceps.



SETS OF EYE INSTRUMENTS IN CASES.

SET OF EYE INSTRUMENTS No. 1.

1	Beer's Knife,	$1 50
1	Curved Needle,	1 25
1	Iris Needle,	1 25
1	Pair of Forceps,	1 50
1	Pair of Scissors, curved on the flat, fine points,	1 50
1	Plain Wire Speculum,	1 00
1	Strabismus Hook,	1 25
1	Dix's Spud for removing foreign bodies,	1 25
1	Silver Probe,	38
3	Suture Needles, fine silk,	75
1	Tyrrell's Sharp Iris Hook,	1 25
1	Daviel's Curette,	1 50
1	Morocco Case, lined with silk velvet,	2 75
	Amount,	$17 13

Set No. 1 in a Rosewood Case, $19.

SET OF EYE INSTRUMENTS No. 2.

1	Beer's Knife,	$1 50
1	Keratome, or Artificial Pupil Knife,	1 50
1	Dix's Spud for removing foreign bodies,	1 25
1	Curved Needle,	1 25
1	Straight Needle,	1 25
1	Pair of Straight Iris Scissors,	1 50
1	Pair of Strabismus Scissors,	1 50
1	Strabismus Hook,	1 25
1	Parker's Fistula Lachrymalis Knife,	1 75
1	Plain Wire Speculum,	1 00
1	Tyrrell's Blunt Hook,	1 25
1	Silver Probe,	38
1	Critchet's Lens Scoop,	1 75
1	Pair of Forceps,	1 25
6	Suture Needles, fine silk,	1 25
1	Rosewood Case, lined with silk velvet,	4 50
	Amount,	$24 13

EYE INSTRUMENTS.

INSTRUMENTS FOR OPERATING ON THE LIDS AND LACHRYMAL DUCTS.

FIG. 14. Galante's Eye Speculum.

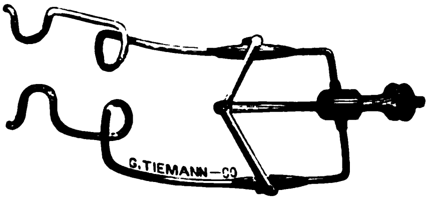
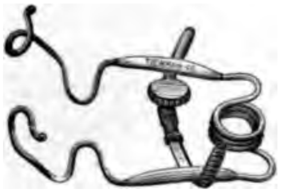


FIG. 14b. Liebreich's Eye Speculum.



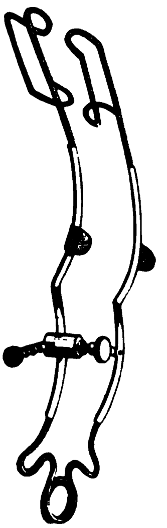


FIG. 15. Graefe's Eye Speculum.

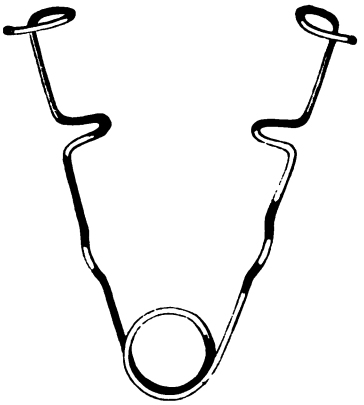


FIG. 16. Plain Wire Eye Speculum.

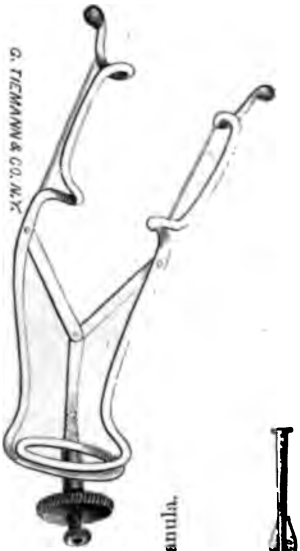


FIG. 17. Noyes' Improved Eye Speculum.

FIG. 18. Noyes' Plain Eye Speculum.

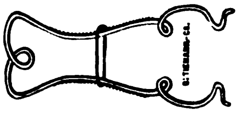


FIG. 19. Liebold's Eye Speculum.

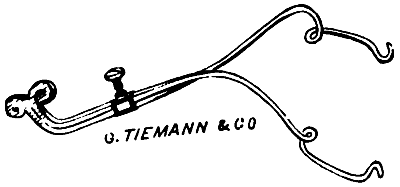
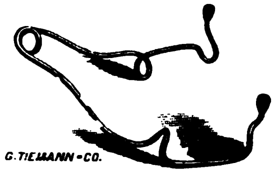


FIG. 20. Hart's Eye Speculum.



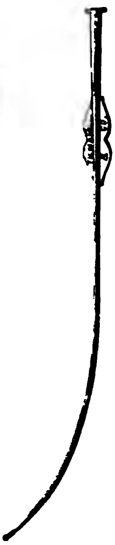
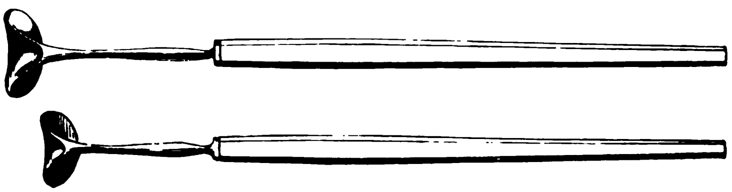


FIG. 20b. Wecker's Lachrymal Canula.

FIGS. 21, 22. Desmarre's Eye-lid Retractors.



SETS OF EYE INSTRUMENTS IN CASES.

SET OF EYE INSTRUMENTS No. 3.

1	Graefe's Linear Knife,	$1 50
1	Parker's Fistula Lachrymalis Knife,	1 75
1	Beer's Cataract Knife,	1 50
1	Desmarre's Scarificator,	1 50
1	Straight Keratome, for artificial pupil,	1 50
1	Angular Keratome, for artificial pupil,	1 75
1	Strabismus Hook,	1 25
1	Small Scalpel, for operating upon the lids,	1 50
1	Large Curved Needle, Couching,	1 25
1	Small Curved Needle,	1 25
1	Straight Iris Needle,	1 25
1	Cystotome, for lacerating the capsule,	1 50
1	Tyrrell's Blunt Hook,	1 25
1	Tyrrell's Scoop,	1 75
1	Plain Wire Speculum,	1 00
1	Pair of Cilia (or Eye-lash) Forceps,	1 00
1	Pair of Strabismus Forceps,	1 25
1	Pair of Iridectomy Forceps,	1 50
1	Pair of Straight Iris Scissors,	1 50
1	Pair of Iris Scissors, curved on the flat,	1 50
1	Anel's Silver Probe,	38
6	Suture Needles and Fine Silk,	1 25
1	Rosewood Case, lined with silk velvet,	4 75
	Amount,	$34 63

SET OF STRABISMUS INSTRUMENTS No. 4.

1	Pair of Strabismus Scissors,	$1 50
1	Pair of Strabismus Forceps,	1 25
1	Double Hook, for fixing the eye,	1 50
1	Strabismus Hook,	1 25
1	Plain Wire Speculum,	1 00
1	Morocco Case,	1 75
	Amount,	$8 25

EYE INSTRUMENTS.

INSTRUMENTS FOR OPERATING ON THE LIDS AND LACHRYMAL DUCTS.

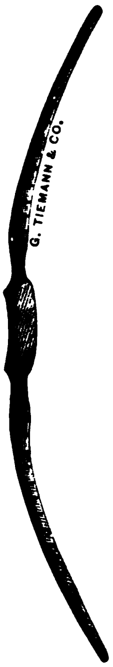


FIG. 23. Weber's Graduated Dilator.

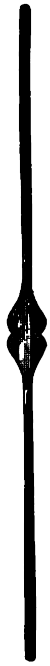


FIG. 24. Speir's Lachrymal Catheter.

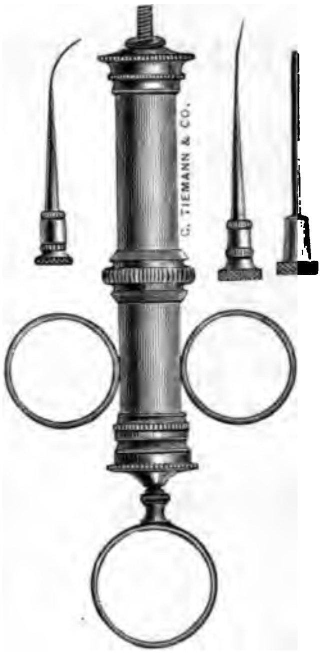


FIG. 25. Anel's Silver Eye Syringe. Silver and Gold Points.

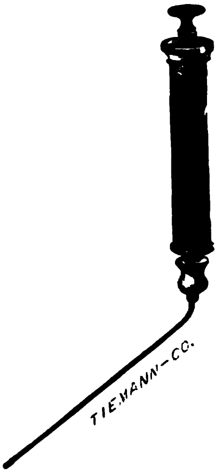
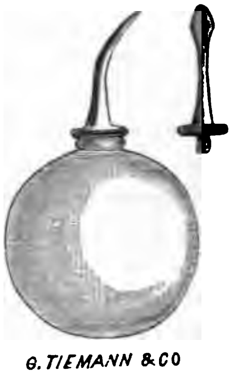


FIG. 26. McFarlan's Lachrymal Syringe.

FIG. 28.



Liebold's Subpalpebral Syringe.

FIG. 27. Drop Glass for the Eye.

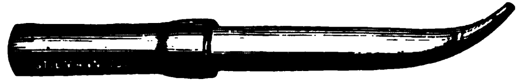


FIG. 29. Agnew's Lachrymal Syringe

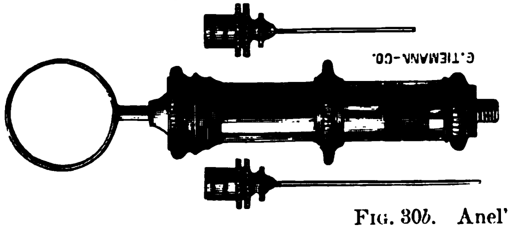


FIG. 30. Galezowsky's Canalicula Dilator.

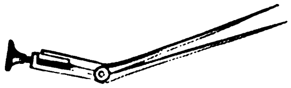


FIG. 30b. Anel's Probe.

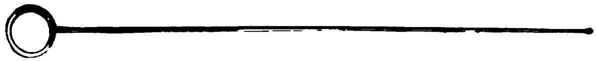
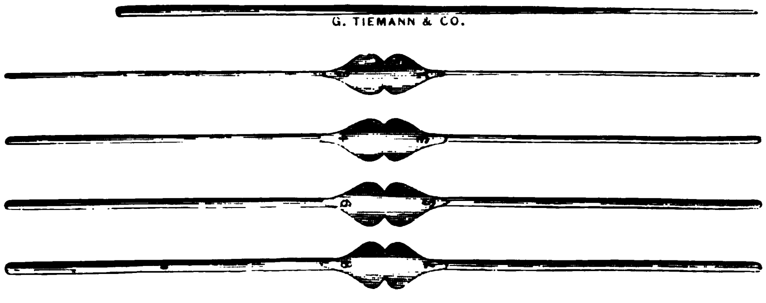


Fig. 31. Bowman's Director; and Nos. 1, 2, 3, 4, 5, 6, 7, 8, Probes.



EYE INSTRUMENTS.

INSTRUMENTS FOR OPERATING ON THE LIDS AND LACHRYMAL DUCTS.

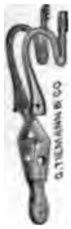


FIG. 33*b*. Noyes' Conjunctiva Forceps.

FIG. 32. William's Set of Lachrymal Probes.
a, *b*. Probes. *c*. Dilator. *d*, *e*. Styles.

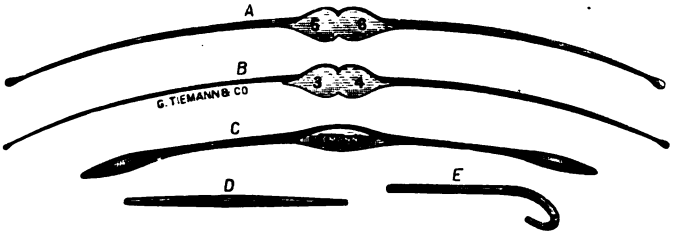


FIG. 34. Liebreich's Probe and Fistula Knife.

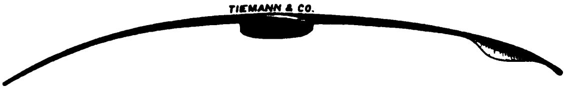


FIG. 35. Manfredi's Speculum.

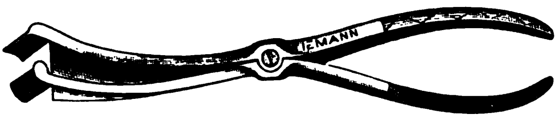
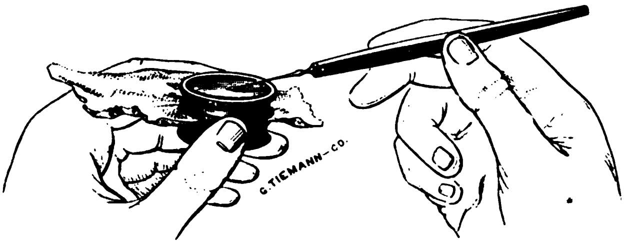


FIG. 35*b*. Test Drum, to try the edges of Eye Instruments.


G. TIEMANN & CO.

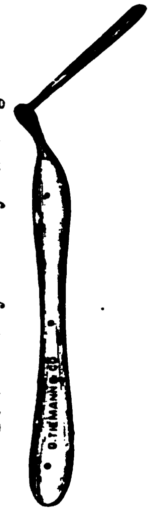


FIG. 36. Noyes' Lachrymal Gouge.

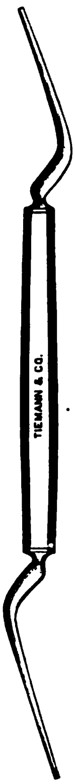


FIG. 33. Levi's Probe.

SMALL SET OF EYE INSTRUMENTS. No. 5.

1 Curved Couching Needle,	$1 25
1 Strabismus Hook,	1 25
1 Beer's Cataract Knife,	1 50
1 Double Hook, for fixing the eye-ball,	1 50
1 Pair of Plain Curved Forceps,	1 25
1 Pair of Strabismus Scissors,	1 50
1 Plain Wire Eye Speculum,	1 00
1 Morocco Case, lined with silk velvet,	2 50
Amount,	$11 75

EYE INSTRUMENTS.

INSTRUMENTS FOR OPERATING ON THE LIDS AND LACHRYMAL DUCTS.

FIG. 37. Bowman's Canalicula Knife. (Director Fig. 31.)

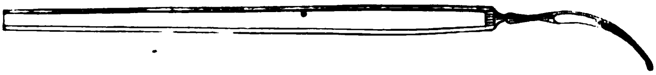


FIG. 38. Gensoul's Canula for Cauterizing the Nasal Duct.

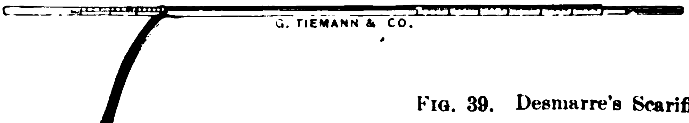


FIG. 39. Desmarre's Scarificator.

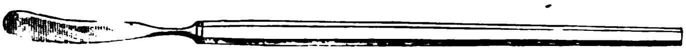


FIG 40. Maunoir's Canalicula Scissors.

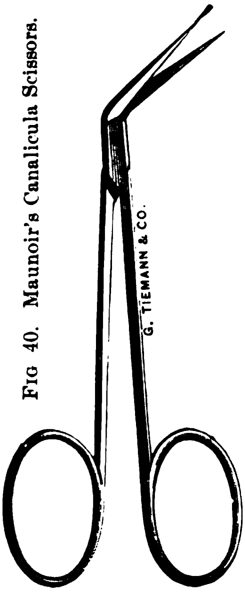


FIG. 41. Stilling's Canalicula Knife.

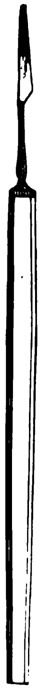


FIG. 42. Weber's Curved Canalicula Knife.

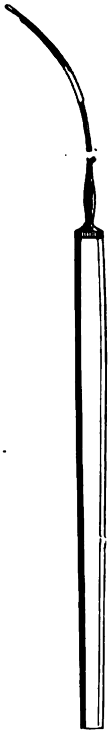
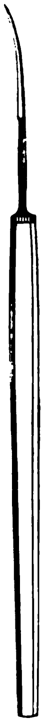


FIG. 43. Weber's Half-Curved Canalicula Knife.



FIGS. 44, 45. Desmarre's Cautery Iron and Many-Pronged Hook for Obliterating the Sac

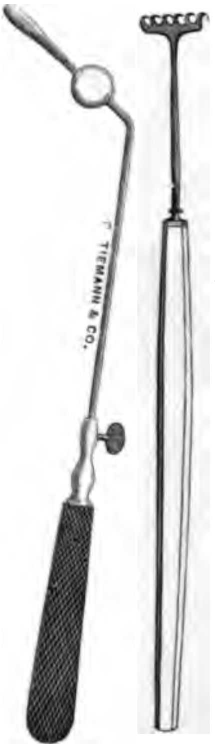


FIG. 46. Noyes' Movable Blade Canalicula Knife.

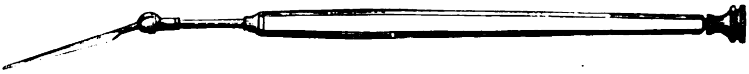


FIG. 47. Noyes' Plain Canalicula Knife.

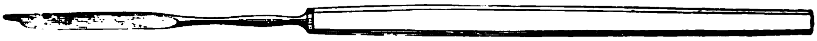
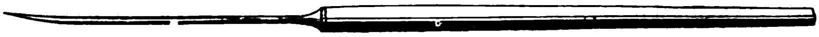


FIG. 48. Parker's Fistula Lachrymalis Knife.



SETS OF EYE INSTRUMENTS IN CASES.

COMPLETE SET OF EYE INSTRUMENTS No. 7.

2	Graefe's Linear Knives, $1.50,	$3 00
1	Beer's Cataract Knife,	1 50
1	Pair of Straight Iris Forceps,	1 50
1	Pair of Curved Iris Forceps,	1 50
1	Pair of Strabismus Scissors,	1 50
1	Cystotome and Daviel's Curette,	2 50
1	Gouge, for removing foreign bodies,	1 50
1	Silver Lens Scoop,	2 00
1	Straight Keratome,	1 50
2	Angular Keratomes, large and small, $1.75,	3 50
1	Pair Cilia Forceps,	1 25
1	Steel Blunt Spatula,	1 25
1	Tyrrell's Blunt Hook, soft shank,	1 25
1	Tyrrell's Sharp Iris Hook,	1 25
2	Strabismus Hooks, $1.25,	2 50
1	Curved Needle, for removing foreign bodies,	1 25
2	Straight Delicate Scalpels, $1.50,	3 00
1	Liebreich's Best Ophthalmoscope,	6 50
2	Desmarre's Lid Retractors, $1.75,	3 50
2	Desmarre's Eye Specula, right and left, with set-screw, $2.25,	4 50
1	Weber's Graduated Dilator,	1 00
1	Set of Bowman's Silver Probes, Nos. 1 to 8,	3 00
1	Pair of Straight, Spring-catch, Fixation Forceps,	2 50
1	Pair of Slide-catch Fenestrated Artery Forceps,	3 00
1	Pair of Desmarre's Entropium Forceps;	3 00
2	Pairs of Snellen's Right and Left Entropium Forceps, $3.00,	6 00
1	Anel's Hard-rubber Syringe, 2 silver gilt points,	5 50
1	Brush and Caustic-holder,	2 50
1	Jaeger's Plate Lid Holder,	1 00
6	Suture Needles and Fine Silk,	1 25
1	Hard-rubber Spatula, to apply ointment,	75
2	Bowman's Stop Needles, $1.50,	3 00
1	Paracentesis Needle,	1 75
1	Straight Broad Needle,	1 25
1	Delicate Shell Spoon,	1 75
1	Double Hard-rubber Curette,	1 50
1	Stilling's Canalicula Knife,	1 50
1	Graefe's Tractor,	1 50
1	Pair Delicate Bone-gouging Forceps,	3 00
1	Rosewood Brass-bound Case, lined with silk velvet,	16 00
	Amount,	$107 00

EYE INSTRUMENTS.

INSTRUMENTS FOR OPERATING ON THE LIDS AND LACHRYMAL DUCTS.

FIG. 49. Jaeger's Bistoury Caché for the Canalicula.

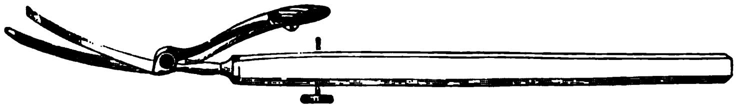


FIG. 50. Beaumont's Concealed Canalicula Knife.

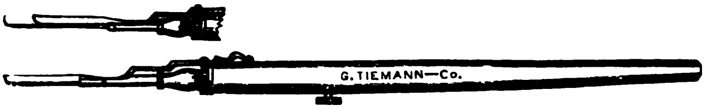


FIG. 51. Agnew's Canalicula Knife.

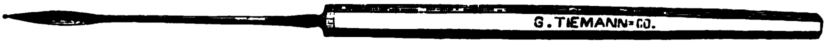


FIG. 52. Sand's Needle Forceps.

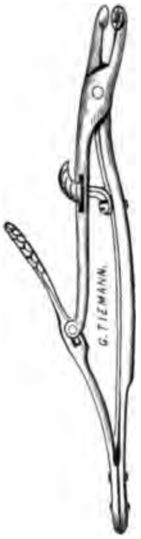


FIG. 53. Prout's Needle Forceps.

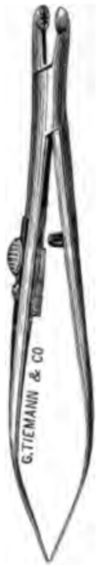


FIG. 54. Scalpel for Operating upon the Lids.

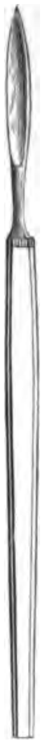


FIG. 54b. Medium Size Scalpel.

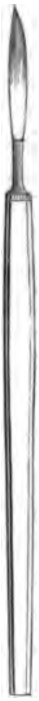


FIG. 54c. Small Size Scalpel.

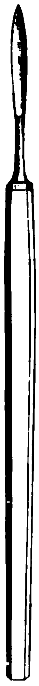


FIG. 55. Petit's Fistula Lachrymalis Knife.

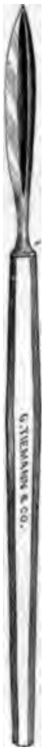


FIG. 56. Noyes-Stilling's Knife.

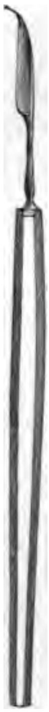


FIG. 56b. Greenslade's Concealed Canalicula Knife.

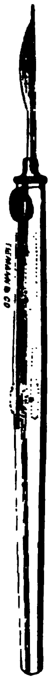
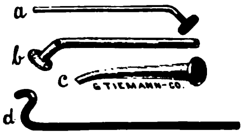


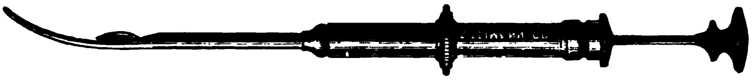
FIG. 57. Styles and Lachrymal Canula.



Fine Suture Needles, Suture Silk (white and black), fine Silver wire. **Page 63, Part I.**

Styles made of gold, silver, aluminium, hard rubber and lead, solid and canulated; also lead wire.

FIG. 58. Girard Teulon's Canalicula Instrument.



NOYES' SET OF EYE INSTRUMENTS No. 8.

2 Desmarre's Eye-lid Retractors, large and small, $1.75, . .	$3 50
1 Plain Wire Speculum, ...	1 00
1 Noyes' Plain Canalicula Knife, ...	1 75
1 Set of Bowman's Probes, Nos. 1 to 8, ...	3 00
Some Lead Wire, Nos. 4 to 8, ...	50
1 Small Scalpel, ...	1 50
1 Hard-rubber Dental Syringe, ...	1 00
2 Strabismus Hooks, large and small, $1.25, ...	2 50
1 Pair of Straight Iris Scissors, ...	1 50
1 Pair of Curved Iris Scissors, ...	1 50
1 Pair of Fixation Forceps, ...	2 00
1 Pair of Plain Dissecting Forceps, ...	75
1 Dix's Spud, for removing foreign bodies, ...	1 25
1 Spatula, ...	1 25
1 Straight Iridectomy Knife (Keratome), ...	1 50
1 Angular Iridectomy Knife, ...	1 75
1 Short Iris Forceps, ...	1 50
1 Large Curved Iris Forceps, ...	1 50
1 Tyrrell's Blunt Hook, ...	1 25
2 Straight Discission Needles, $1.25, ...	2 50
1 Graefe's Linear Knife, wide pattern, ...	1 50
1 Small Sharp Iris Hook, ...	1 25
1 Pair of Prout's Entropium Forceps, ...	4 00
1 Cystotome and Curette, ...	2 50
1 Sand's Needle Forceps, ...	4 50
6 Small Curved and 3 Straight Suture Needles, and fine Silk, .	2 00
2 Graefe's Linear Knives, narrow pattern, $1.50, ...	3 00
1 Hard-rubber Spoon, ...	75
1 Critchett's Lens Scoop, ...	1 75
1 Rosewood Brass-bound Case, lined with silk velvet, . .	12 00
Amount, . .	$66 25

EYE INSTRUMENTS.

STRABISMUS INSTRUMENTS.

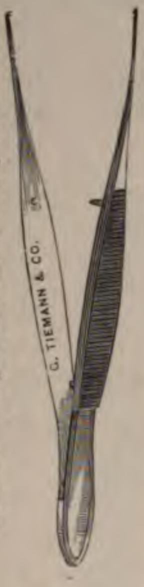


FIG. 59. Straight Strabismus Forceps, Delicate.

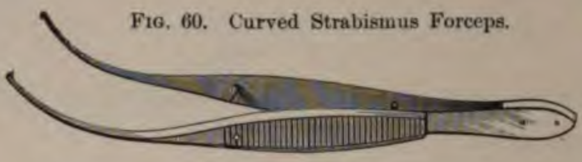


FIG. 60. Curved Strabismus Forceps.

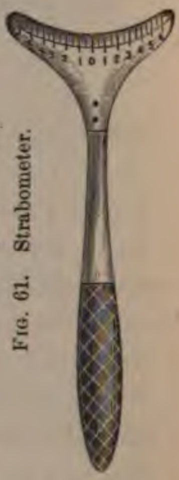


FIG. 61. Strabometer.

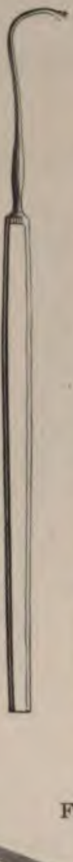


FIG. 62. Large Strabismus Hook.

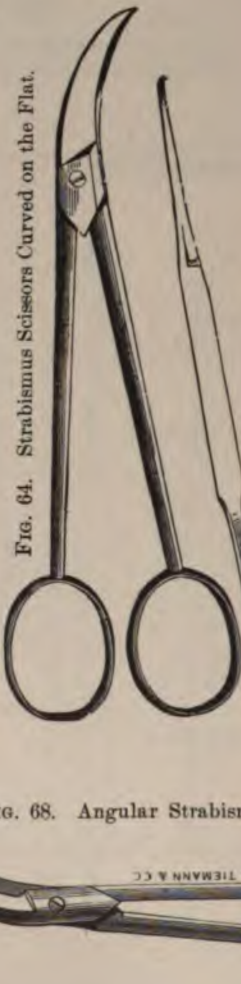


FIG. 64. Strabismus Scissors Curved on the Flat.

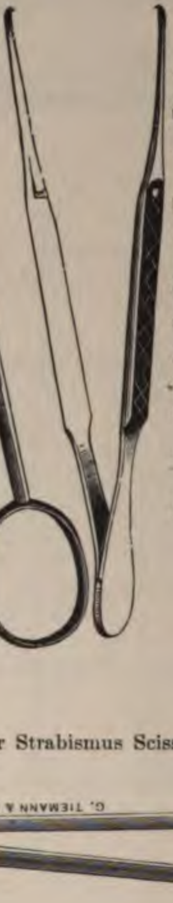


FIG. 65. Straight Strabismus Forceps, Stout.

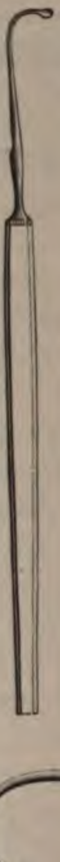
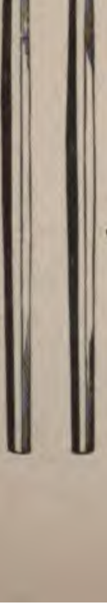


FIG. 63. Small Strabismus Hook.



FIGS. 66, 67. Half-Curved Strabismus Hook, and Double Hook.

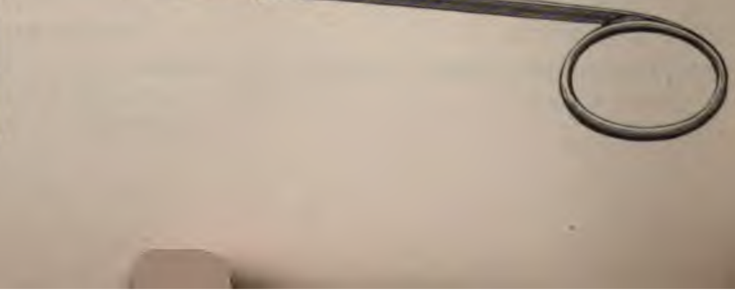


FIG. 68. Angular Strabismus Scissors.

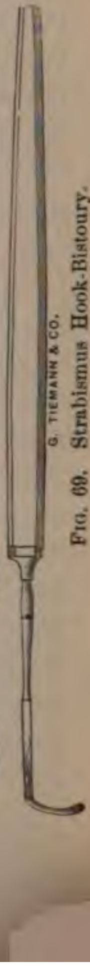
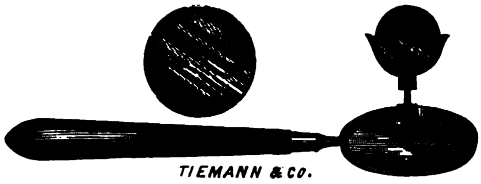


FIG. 69. Strabismus Hook-Bistoury.

FIG. 70. Liebreich's Ophthalmoscope.

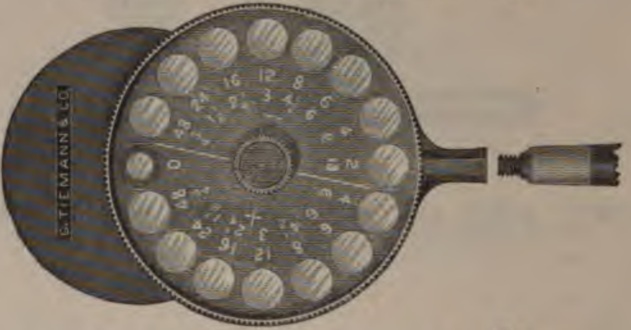


AGNEW'S SET OF EYE INSTRUMENTS No. 9.

1	Agnew's Glass Syringe, metal mounted, with two silver points (for lachrymal disease),	$5·00
1	Set of Bowman's Probes, Nos. 2 to 8,	3 00
1	Agnew's Knife, modified, longer than Weber's, and temper taken out of a quarter of an inch of the shank,	1 75
2	Strabismus Hooks, $1.25,	2 50
1	Pair of Strabismus Forceps,	1 25
1	Pair of Straight Scissors, small, rounded points,	1 50
1	Pair of Scissors, curved on the flat, delicate,	1 50
1	Pair of Iris Forceps, delicate,	1 50
1	Graefe's Linear Cataract Knife,	1 50
1	Liebreich's Linear Cataract Knife, narrow,	1 50
1	Cystotome,	1 25
1	Small Cataract Needle,	1 25
2	Stop Needles, $1.50,	3 00
1	Small Sharp Hook,	1 25
1	Graefe's Spring Speculum,	2 50
1	Paracentesis Needle, Desmarre's,	1 75
1	Iridectomy Knife, angular,	1 75
1	Pair of Fixation Forceps, spring-catch,	2 50
1	Pair of Prout's Needle Forceps,	3 50
6	Fine, Curved Suture Needles, and Fine Silk,	2 00
1	Double Lid Elevator, with hinge so as to shut up on itself,	3 00
1	Beer's Cataract Knife,	1 50
1	Pair of Large Straight Scissors,	1 50
1	Pair of Large Scissors, curved on the flat, for enucleation,	1 50
1	Rosewood Case, lined with silk velvet,	8 50
	Amount,	$57 75

OPHTHALMOSCOPES.

FIG. 70*b*. Loring's Student Ophthalmoscope.


G. TIEMANN & CO.

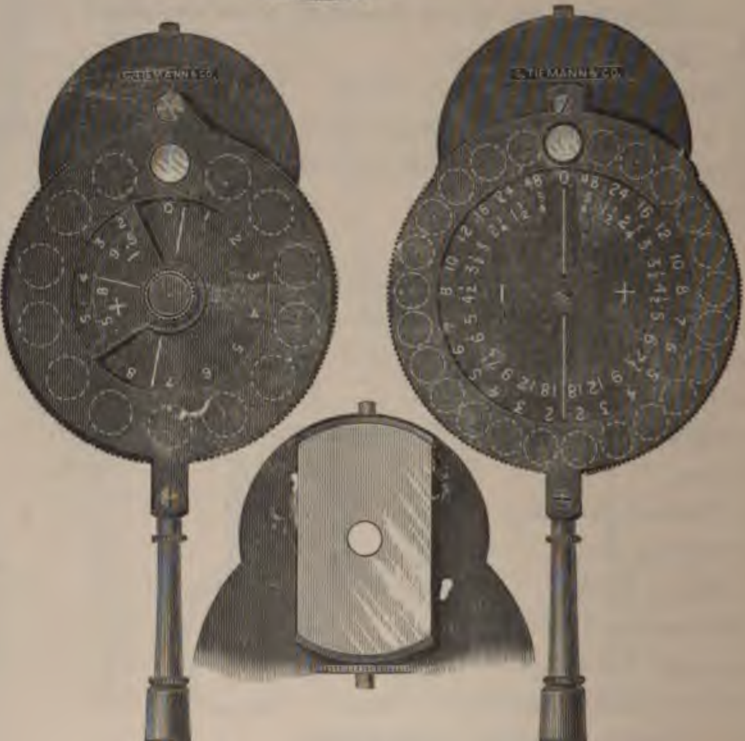
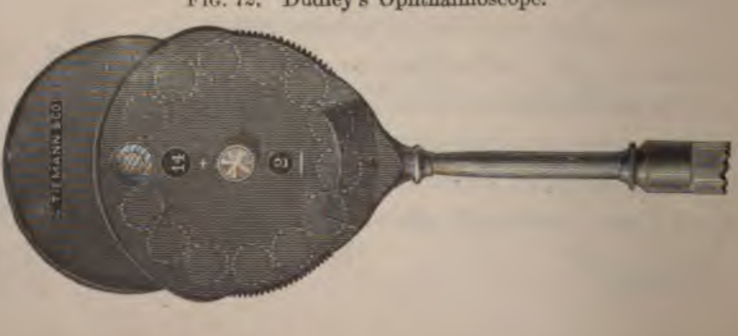

G. TIEMANN & CO.
G. TIEMANN & CO.

FIG. 71. Loring's Double Disk Upright Image Ophthalmoscope.

FIG. 71*b*. Loring's Single Disk Upright Image Ophthalmoscope.

FIG. 72. Dudley's Ophthalmoscope.



ON THE USE OF THE OPHTHALMOSCOPE.

BY JONATHAN HUTCHINSON, ESQ.,
Surgeon to the London Hospital.

Some of the simplest applications of optics to the observation of the eye, and the detection of diseased conditions, depend upon the fact that the transparent structures still reflect some light, and more when diseased than when healthy. Thus:

FIRSTLY. We examine the reflecting efficiency of the surface of the cornea, in order to determine its transparency. In cases in which there is no large opacity, but simply a case of general steaminess caused by an uneven surface, it may be difficult to detect it by direct inspection, but if we expose the eye to the light, and look at the image of the window-frame produced, we shall see directly that this image is blurred and indistinct, like that from a greasy mirror.

SECONDLY. We use what is called the catoptric test to determine the presence or absence of the lens. This depends upon the fact that the surfaces of the lens reflect images. Dilate the pupil well with atropia. Hold a small taper in front of the pupil in a dark room. You will observe, if the lens be present, three images: an anterior one, bright, distinct and erect—from the front surface of the cornea; a middle one, inverted, small, fairly distinct—from the concave posterior surface of the lens capsule; a posterior one, erect, indistinct—from the anterior surface of the lens capsule.

THIRDLY. Again, the surfaces of the crystalline lens easily become visible, by the light which they reflect, whenever we can see them obliquely. When the lens is in its normal position it is difficult, unless by oblique illumination, to see its surface; but if it is malplaced, as we sometimes find it, by congenital imperfection, or from injuries, then its surfaces, being oblique, become easily visible. Any one not aware of this fact would at once declare that the malplaced lens was also slightly opaque, and erroneous observations to that effect are to be found in some records of such cases.

In former days the catoptric test used to be much employed to determine the transparency, or otherwise, of the crystalline lens. Now, however, it has been wholly superseded by another discovery, which in its every-day usefulness is second only to that of the ophthalmoscope itself. I allude to oblique illumination. To accomplish this is the easiest matter possible, and by its aid any one of the slightest skill can, in almost all cases, determine at a glance the condition of the patient's pupil and of his crystalline lens. The smallest dots of pigment on the capsule, the least possible streaks of an incipient cataract, become by its aid conspicuously definite. We have no longer any need for the curious, but very disappointing, catoptric test (which fails us just when most needed, *i.e.*, in slight cases; for the discovery of cataract, in any stage whatever, is now perfectly easy. For oblique illumination you need only a candle and a convex lens, say a two-inch. The pupil should be dilated with atropia, and the candle having been placed to one side the patient's head, the lens is held so as to receive its light, and concentrate it to a pencil, which is thrown upon the patient's eye. All the superficial parts, *i.e.*, the cornea, the iris, the pupil, and the lens, may thus be brilliantly lighted up. In addition to the illumination, we may also, with another lens, employ magnifying power, and thus inspect the state of things yet more accurately.

Oblique illumination is applicable to all morbid conditions of the cornea, iris, or lens, and to blood-clots in the anterior part of the vitreous or new growths which bulge forwards into the anterior half of the globe. You cannot, however, by its aid, see the fundus of the eye. To do this we must employ another instrument. Here let us ask the important question, Why is an ophthalmoscope necessary? Why can we not, by simply looking into the little round box, one inch deep, which constitutes an eyeball, see what is at its bottom? The answer is, that the eyeball is not simply a box, it is an optical instrument, and it is from its lens apparatus that the difficulty comes. The rays of light received by the eye are brought to a focus in the retina; back again from the retina they are reflected, and pass out of the eye, destined to depict somewhere an image of the retina itself. The lens apparatus, however, not only brings the rays passing in to a certain and definite focus on the retina, but it acts on those which pass back, and brings these also to a focus at a certain and definite place. There is no difficulty whatever in illuminating the fundus, any light held in front of the eye will do that, nor have the structures of the fundus any difficulty in reflecting light by which they themselves ought in turn to become visible. The difficulty is in bringing the eye of the observer into the line of the reflected rays; this without artificial aid is impossible, and hence the necessity for the ophthalmoscope.

I have said that every lens has a principal focus, or spot at which parallel rays which impinge upon it are made to meet by the convergence induced. Now, suppose that from this focus the rays are reflected back again, they must pass through the lens in the reverse direction, and will again become parallel. If, however, divergent rays be used, they will in returning be converged and made to meet at another focus in front of it. Inasmuch as the rays were at first not parallel but divergent, the focus at which, after passing through the lens, they meet, will not be at the same distance as that for parallel rays, but at a greater one. The distance will always be in exact proportion to the degree of divergence, and thus the two foci will always bear mutual relations to each other. If one be brought nearer to the lens the other will be further off, and *vice versâ*. Let us call them from this fact, that they maintain mutual relation, "*conjugate foci*." You may observe, if you like, that although conjugate, they keep each other at a distance. It is absolutely necessary that you should observe that all the rays of light passing out from the eye take a direction towards this conjugate focus, and that thus an observer who would make use of them to see the fundus must bring his eye into their line. This line, however, is the same that the rays took in passing into the eye, and if you try to intercept those coming out, you will intercept those going in and cut off the source of illumination.

Thus if we hold a candle two feet in front of the observed eye, its rays, divergent, will be refracted in entering the eye, and will depict an image on the retina—they will then be reflected and again refracted in such a manner that an image of the fundus will be found at the position of the candle flame, that being the position of the conjugate focus. If the observer puts his head in the direction of these rays between the candle and the observed eye, of course he stops the rays which should have entered from the candle, he illuminates only the outside of his own head, and the eye of his patient is left in shadow. If he tries to see by looking from beyond the candle, then the flame of the latter intercepts his view and dazzles his eye. What is wanted is some contrivance to enable the observer to bring his head into his own light. Now the mirror of the ophthalmoscope does this, a reflecting surface with a small hole in the middle, it practically makes the observer's eye the source of illumination, and brings it into the direction which the rays of light returning to their conjugate focus must take. Foreshadowed by Cumming, invented by Helmholtz, improved by Coccius, Reute, Liebreich, and many others, this little instrument, which has worked such a revolution in ophthalmic science, is thus simple in its essential principle.

The ophthalmoscope as in daily use, consists of two parts, a mirror and an object lens, and to these is often added an eye-piece as well. The mirror, however, is the essential, the other parts are accessories intended for different special purposes. Without troubling you with details respecting the various modifications of the instrument, I will now describe the use of the simplest of them—a reflecting mirror slightly concave, and with a perforation in its centre.

Having placed the patient's head in such a manner that the light (a lamp, candle, or gas-light) is on a level with his temple, and slightly behind it, and his face, as a consequence, in shadow, the observer sits in front and applies the ophthalmoscope mirror to his own eye. He should keep both eyes open that he may see where the light falls, and then move the mirror until the light falls full on the pupil of his patient. In a moment he will perceive the first fact which this instrument reveals, that the fundus is not black, as it has always appeared to be before, but that it is of a brilliant fire-red. He will, however, see nothing of the fundus distinctly, only a general red reflex. Now at this point the student must stop awhile and use his mirror, to inspect, first, the transparency of the cornea, and next, that of the lens and vitreous, and to do this he must make the patient move his eye in various directions. After a little practice he will be able to manage his light well, and to throw it with precision wherever he may wish, and to keep it steadily on any given part. At a first lesson he may even, with advantage, practice for awhile by illuminating the second button of the patient's waistcoat. Tact in directing the light having been obtained, we may now proceed further. Instruct the patient to look, not full in your face, but over one shoulder; if you are inspecting his *right* eye, over your *left* shoulder. You will, when he does this, notice at once that the tint of the light reflected from his fundus is changed, that it is no longer fire-red but canary-yellow. The reason of this is that a different part of the fundus is exposed to view, that, namely, of the optic disc itself, which is much lighter in color than the rest. The area of yellow is very large—occupies, indeed, the whole of the field, while we know that the disc itself is very small. This proves that the objects thus indistinctly seen are immensely magnified. Magnified by what? By the patient's own eye, which, as we have said, is equivalent to a lens of one-inch focus.

Hitherto, we have seen nothing distinctly, but if the observer now brings his head very close to his patient's face, he will be able with more or less facility to observe the details at the bottom of the eye, the trunks of vessels of the retina, the optic disc, etc., etc. All these will be seen very large indeed, being still magnified by the patient's eye. What he sees now is equivalent to type looked at through a one-inch lens, placed exactly one inch in front of it.

[It is plain, then, that we cannot see the fundus of the eye without optical aid. Of such aid, we have our choice of the inverted and of the erect. Both are seen much magnified, the latter much more so than the former. For ordinary purposes the inverted image is used. It is seen very easily, and it brings a large field into view at once, so rendering the observer much less liable to inconvenience from slight motions of the patient's head. The examination of the erect image is chiefly useful for the inspection of detail, and even for these it requires great practice.]

Next I will attempt a few suggestions by which beginners, and those who use the instrument but seldom, may best hope to avoid mistakes.

1. Always indulge yourself in the use of atropine, and by its aid both enlarge the patient's pupil and paralyze his accommodation. Experts can manage without, and may sometimes smile at those who are obliged to use it, but the increased facility which it gives is such that no beginner should neglect it. The objection that it causes the patient inconvenience is a very trivial one. What the patient wants before all things is, that a correct opinion should be formed, and to this end he is quite prepared to make a little sacrifice of convenience. For want of the use of atropine I think I have known even experts overlook things which would have been apparent at a glance had it been used.

2. Always proceed on system. Examine the eye first without the object-lens, and ascertain the state of the cornea, lens, and vitreous. No mistake is easier to make, or more frequently made, than by the immediate employment of the inverted image to overlook the fact that the media are not perfectly transparent. With strong illumination you can look right through a slight opacity in the cornea, lens, or vitreous, and observe only that the retina and choroid are seen indistinctly. Many a diagnosis of "hazy retina" ought to have been "opaque vitreous." It is like criticising the beauty of a prospect, and declaring that it looks dull, when you have forgotten to observe that the window wanted cleaning. If you have any doubt as to the state of the cornea or lens, examine them by oblique illumination before going further. Many opacities in the cornea are so slight that you overlook them on naked-eye inspection, and also with the ophthalmoscope mirror, but find them directly by oblique illumination. Need I add that you must be very particular that your object-lens, when you use it, is quite clean. Any stains on it will be seen as if on the patient's retina.

3. Having completed your examination of the media, still proceed on system. The next duty is to estimate the length of the eyeball. A patient may come complaining that he is rapidly losing his sight, and you may find that it really has become so defective that he cannot read the largest ordinary print. You hastily assume that he must have some disease of the deep parts, some form of amaurosis. You proceed to ophthalmoscopic examination, and again hastily employ both mirror and object-lens, and it is quite possible that you may overlook altogether the fact that the eyeball is much too short and the patient hypermetropic. In high degrees of hypermetropia, if sudden failure of accommodation happen to occur, the defect in sight may often be so great as to draw the attention quite away from the right scent. I have already described the

method by which we ascertain whether an eye is abnormal as to length. For the benefit of the mere novice, I may, however, here add, that whenever, without the object-lens, any of the details of the fundus—vessels, disc, patches, etc.—are easily seen, he may be quite sure that the globe is either too long or too short, or that the lens is wanting. If these objects are seen very easily, and the image very bright and beautiful, then, in all probability, it is an inverted image, and the eye is myopic. If only large trunks of vessels have been seen, and these not easily kept in view, then probably it is the erect image, and the eye hypermetropic.

4. Still proceed on system. Having ascertained that the media are clear, and that the eyeball does not materially deviate from its normal length in either direction, you may now examine in succession the optic disc and its vessels, the retina, and choroid near to it, the yellow spot, and lastly, the outlying districts. I must mention each of these separately.

5. The Optic Disc. Note its shape, its margins, whether definite or otherwise, its color, and its level. Observe whether the vessels upon it are seen sharply or not, and look particularly as to how they conduct themselves at its margin. Distinguish between artery and vein, and note the size of each. It is a common mistake with young observers to pay attention to the vein only. In the healthy state the disc should be round, and its choroidal rim distinct and sharp; the vessels on its surface should be seen with beautiful clearness, and the difference between vein and artery, as to size and color, should be readily distinguished. In the centre, or near it, and close to where the trunks of the vessels dip back, there will be seen a bright white patch. This white patch may be large and very conspicuous in some eyes, and small in others, whilst still the eye is not in the least diseased. As regards the vessels, you must distinguish between the large branches of those destined to supply the retina, and the minute ones which give a general pink tint to the nerve itself. The latter may be much diminished, whilst the former retain their size.

Amongst the more common peculiarities displayed by the disc in a state of disease, we have—

1st. The formation of crescents by its side, or of irregular circles around it in myopia.

2d. A jagged condition of the choroidal rim, indicating either the commencement of crescents, or the previous occurrence of inflammation (neuritis).

3d. A hazy semi-opaque appearance of the structures in which the retinal vessels run, by which the latter are in part concealed and rendered indistinct. In this state the margins of the choroidal rim are concealed, and the disc appears to be much increased in size, and to be limited by a shaded, indistinct edge. This "woolly" condition implies neuritis.

4th. The disc may be too red or too pale. The pallor sometimes amounts to absolute whiteness, sometimes it is blue-white, and sometimes it is a dirty gray tint. Sometimes the pallor affects the whole disc surface, and at others only a part. If only a part, the third next to the yellow spot is that usually affected, and in commencing cases this is always the first to suffer. The pallor may indicate mere anæmia, with, perhaps, primary atrophy, or it may indicate an anæmia and atrophy which are secondary to inflammation. It requires much experience to decide this point.

5th. The disc, instead of being on the same level as the rest of the retina, may be pushed backwards, or cupped as it is called. This cupping will be recognized by carefully tracing the main trunks of vessels and observing whether they curve on passing over the choroidal margin. If the cup is well marked, the vessels will bend so much that they are lost sight of at the edge of the disc, to be found again on its surface, looking much smaller and paler than those in the retina, and requiring a little movement of the object-lens to bring them well out. Cups of this kind imply intra-ocular pressure, the characteristic of the disease known as glaucoma. With them pulsation of the vessels may often be observed.

Having carefully studied the disc, your attention will next be directed to the retina and its vessels. The retina ought to be almost perfectly transparent, but in dark eyes—and particularly in members of the dark races—a delicate haze, or bloom-of-plum appearance, may be observed in it, especially near to the yellow spot. You ought to be able to trace the retinal vessels with the greatest ease. If this cannot be done, then inflammation of some kind or degree is present. The grand characteristic of inflammation, as far as the retina is concerned, is opacity. This opacity may vary from the merest haze to that of the dense white or gray pellicle. By this haze the trunks of the vessels will probably be more or less concealed, but if the deeper layers of the retina are affected, their concealment may not be much. You will remember that the retina consists of three principal layers—that of rods and bulbs, which is close to the choroid, and probably fed by it, that of nerve cells, granular matter, etc., in the middle, and that of nerve-tubes (derived from the optic), etc., which is innermost. It is in the latter layer only that the arteria and vena centralis run: these vessels have nothing to do with the deeper or outer layers. The inflammation may affect chiefly either the inner or outer layer, being in the one case a neuro-retinitis, in the other a choroido-retinitis.

In some cases of retinitis, as in that which attends Bright's disease, hemorrhages are very common.

The yellow spot is recognized almost as much by its negative features as by any distinctive peculiarities. It is situate a little to apparent nasal side (inverted image) of the optic disc, and is exactly opposite the observer when the patient looks at the ophthalmoscope mirror. No large vessels cross it. It is more highly pigmented than the neighboring parts, and also often looks rather hazy and indistinct. It is here that the deposits characteristic of Bright's disease are earliest seen.

The choroid is the tissue which gives color and glow to the fundus. It may vary exceedingly within the limits of health, and its variations will cause apparent haze, or otherwise, in the retina. Before trusting yourself to any ophthalmoscopic descriptions whatever, examine carefully the differences in the eyes of fair and of dark persons. In the latter you will find the choroidal epithelium full of pigment, and showing dark mapped-out areas, which might easily be supposed to be morbid, whilst the vessels of the choroid are concealed. In the fair-complexioned eye the leashes of vessels will be seen with marvelous brilliancy and beauty, and the suspicion of atrophy will be suggested.

It is much more common to see the results of inflammation in the choroid than to trace the early stages of such. The results are permanent, and very conspicuous. The epithelium may be absorbed in large patches, usually with masses of black pigment remaining. The absorption may implicate deeper layers, and be attended by atrophy of the vascular rete and exposure of the sclerotic. The patchy condition in a case of choroiditis disseminata may be compared to that of a piece of well-marked tortoise-shell.

Inflammation of the choroid in patches is usually of syphilitic origin.

Atrophy of the choroid, independent of inflammation, is frequent in advanced states of myopia.

Inspection of the outlying districts of the fundus is easily-done, by making the patient look upwards, downwards, etc., strongly. It should never be omitted; for not unfrequently changes may here be discovered which will be the key to the case. It is here that the dots of pigment, characteristic of retinitis pigmentosa, will be first found. Here also, in syphilitic inflammation of limited degree, patches may be sometimes found when there are none in the central parts of the fundus.

Having mentioned some of the chief morbid conditions to be expected, I will now specify some of the errors into which novices with the instrument are likely to fall. Like all other instrumental aids—and the stethoscope is a prominent example—the ophthalmoscope must be expected to lead to many mistakes. It is difficult to use, and requires long experience before the observer can trust his own interpretation of what he has seen. Want of familiarity with the varying conditions which may be met in health, is a main cause of error. Thus a well-pigmented choroid in a dark complexioned person may be easily misapprehended. A very large physiological cup may be taken for "white atrophy," or for a glaucoma cup; a margin of black pigment at the edge of the disc may be attributed to disease; and alterations in size of vessels, which are peculiar to the individual, may be supposed to imply anæmia or congestion. It is possible, also, in a highly pigmented eye, to mistake the yellow spot itself for the remains of a blood clot. As to the common error of fancying the retina hazy when the appearances are due to opacity in one or other of the media, I have, I think, already said enough.

Degrees of vascularity are especially difficult of satisfactory comparison. You will hear one authority assert that the disc or retina is congested, when another will declare that they are quite normal. Let me warn you against the diagnosis of "congested retina." In four out of five of the cases in which the words "hyperæmic retina" are used, they are probably employed in error. Both in the optic disc and in the retina, the size of the vessels may differ widely and be still within the bounds of health. Just as one person may have a florid cheek and red ears, and another pale ones, yet both be in good health, so may the color of the optic disc and the size of the retinal vessels differ. The conditions of the circulation in the retina are such as to make any condition analogous to erythema of the skin simply impossible. If you find the retina visibly reddened, be sure that it is not simply "congested," but stained by effusion, in fact, inflamed. The individual arteries are too far apart to give any general red color to the whole. The interpretation of congestion must rest on the enlargement of their trunks only; and this, which is a comparative question, is very difficult to estimate. The old notions as to active congestions preceding inflammation, must be abandoned for the retina, as elsewhere. We now know that cell changes are the essential factors in inflammation, and that it is these that induce vascular changes. I do not by any means deny that the optic disc and retina may in some cases contain too much blood, and yet show no trace of inflammation; but I feel sure that these conditions are far less frequent than they are thought, and I warn the beginner against the fatal facility of explaining amblyopia by discovering congestion.—*Clinical Reports of London Hospital*, 1867–8, *p.* 182

EYE INSTRUMENTS.

KNAPP'S DOUBLE-DISK OPHTHALMOSCOPE.

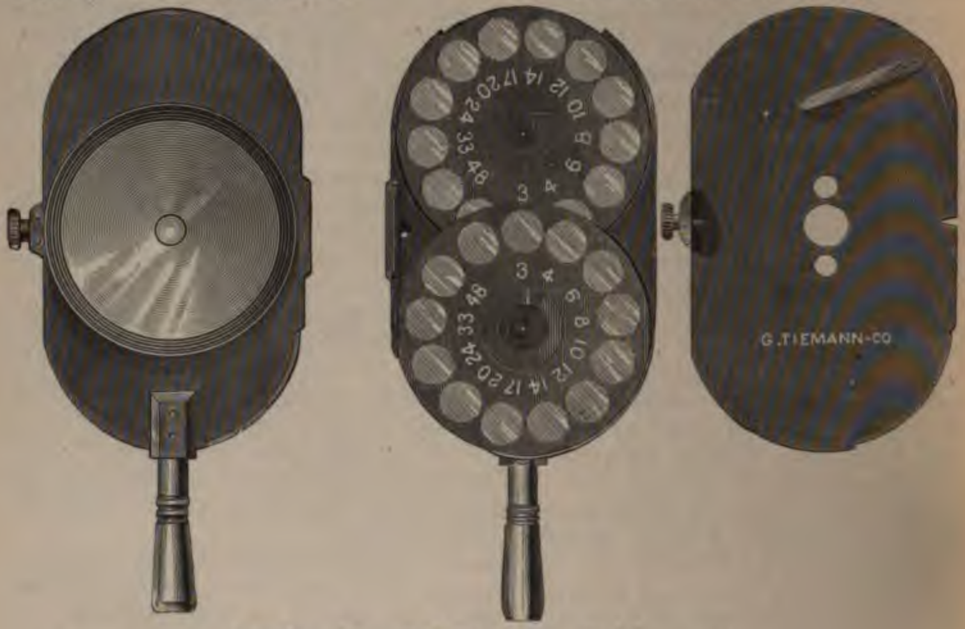
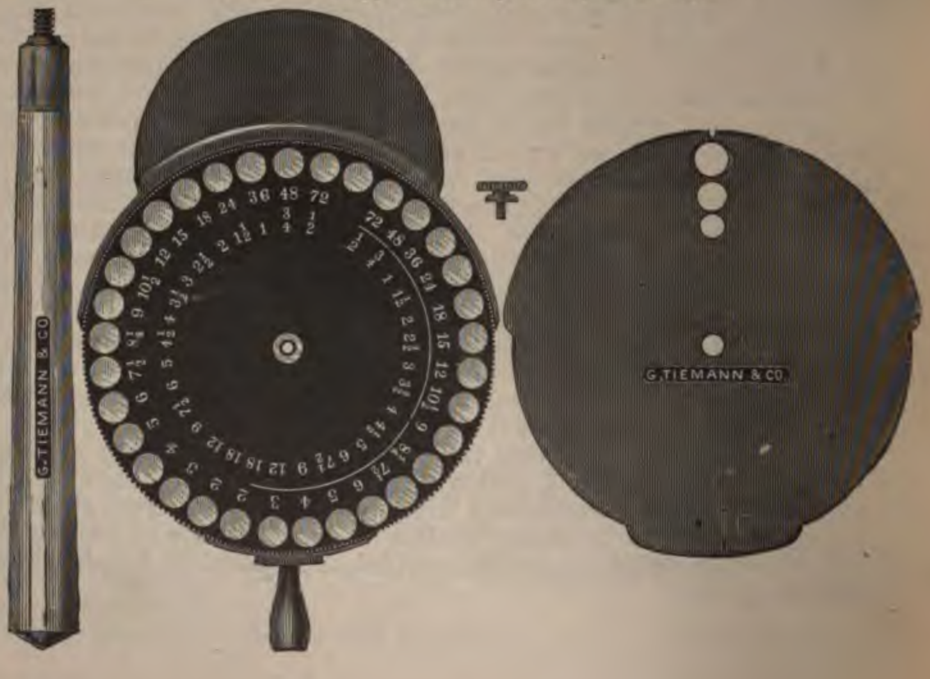


FIG. 73. *a*, Front View (Mirror). *b*, Lens, Disks, and Cover (Removed).

FIG. 73*c*. Knapp's Metric System Opthalmoscope.



EYE INSTRUMENTS.

Fig. 74. Knapp's Single Disk Ophthalmoscope.

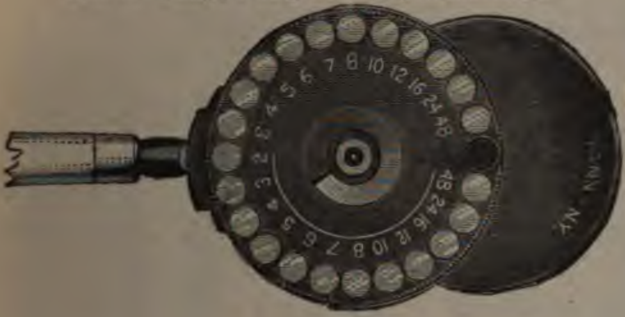


Fig. 75. Pupillometer.

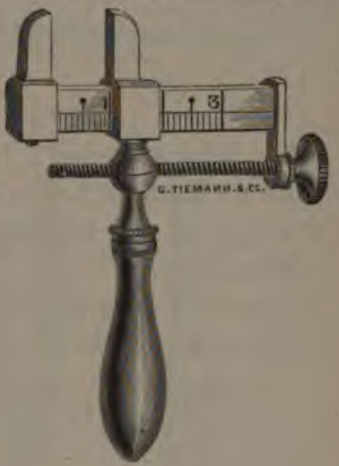


Fig. 76. Thompson's Optometer.

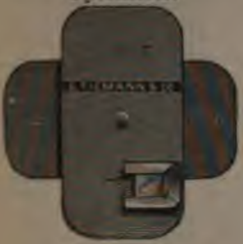


Fig. 77. Nachet's Trial Set.

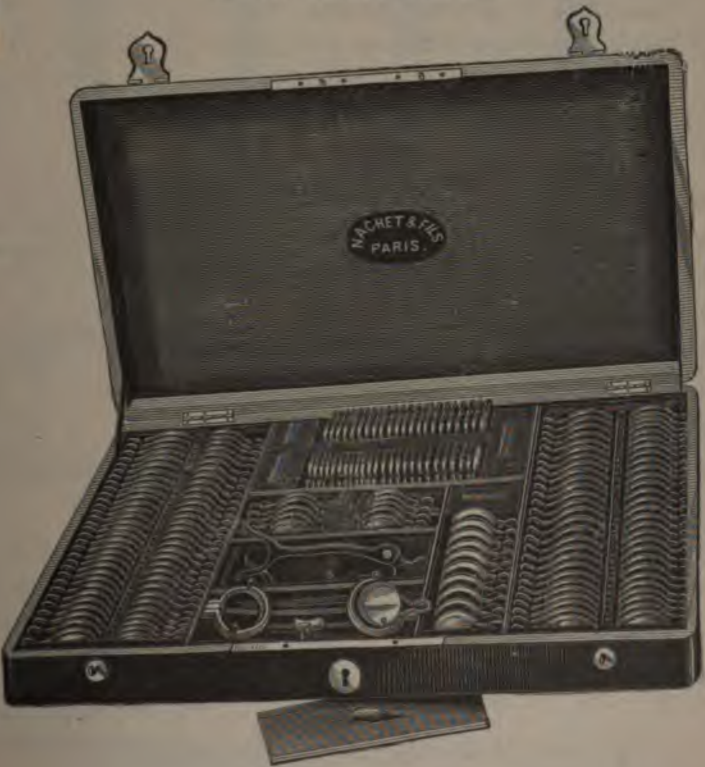
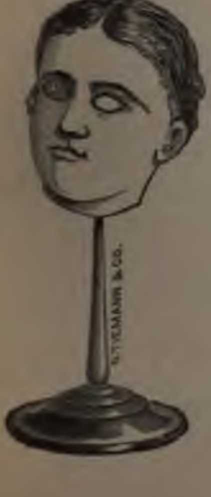


Fig. 77½. Ophthalmo Phantome.


G. TIEMANN & CO.

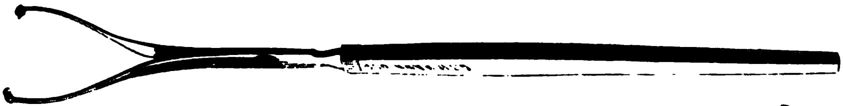
KNAPP'S SET OF EYE INSTRUMENTS.

2 Strabismus Hooks,	$1 25,	$2 50
1 Beer's Cataract Knife,		1 50
1 Graefe's Knife, for Linear Extraction,		1 50
1 Small Scalpel,		1 50
1 Knapp's Foreign-Body Hook, silver,		2 00
1 Discission Needle,		1 25
1 Foreign-Body Needle,		1 25
1 Cystotome and Daviel's Spoon,		2 50
1 Spatula Hook,		1 25
1 Angular Iridectomy Knife,		1 75
1 Bowman's Lachrymal Knife,		1 75
1 Pair of Fixation Forceps, spring-catch,		2 00
1 Pair of Strabismus Scissors, curved,		1 50
2 Desmarre's Lid-Holders,	$1 75,	3 50
1 Porte Caustic, hard-rubber and silver,		1 00
1 Hard-Rubber Copper-Holder,		1 50
1 Pair of Sand's Needle Forceps,		4 50
1 Pair of Iridectomy Forceps, plain,		1 50
1 Pair of Iridectomy Scissors,		1 50
1 Pair of Knapp's Entropium Forceps,		4 00
1 Hard-Rubber Spatula, broad,		1 00
1 Pair of Cilia Forceps,		1 25
½ Doz. Suture Needles and Silk,		1 25
1 Bowman's Probe, Nos. 3 and 4,		75
1 Morocco Case, pocket size,		6 00
	Amount,	$50 00
With 1 Liebreich's Ophthalmoscope,		$54 00
1 Knapp's Ophthalmoscope (see Figs. 73) instead of Liebreich's,		$85 00

EYE INSTRUMENTS.

FIXATION INSTRUMENTS, TO STEADY THE EYEBALL FOR AN OPERATION.

Fig. 78. Ball's Double Hook, for Extirpation.



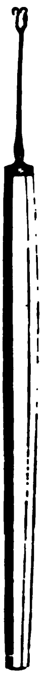


Fig. 79. Double-Hook, for Fixing the Eye.

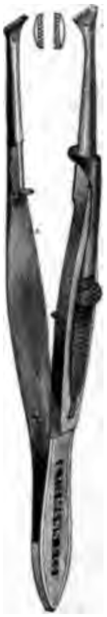


Fig. 80. Carron de Villard's Fixation Forceps.

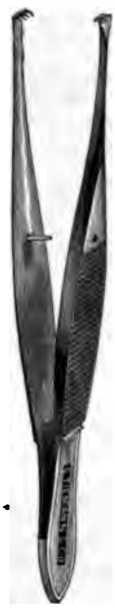


Fig. 80b. Fixation and Tumor Forceps.

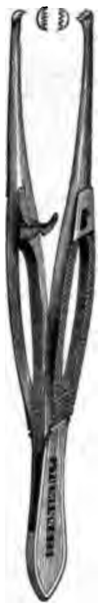


Fig. 80c. Dudley's Fixation Forceps.

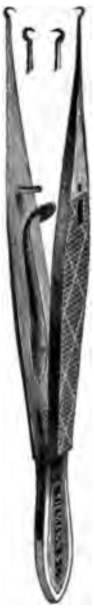


Fig. 80d. De la Roza's Fixation Forceps.

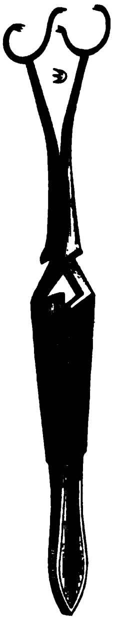


Fig. 80e. Blitz's Extirpation Forceps.

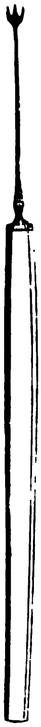


Fig. 80f. Three-Pointed Ophthalmostate.

Fig. 82. Pamard's Pique, for Fixing the Eye.

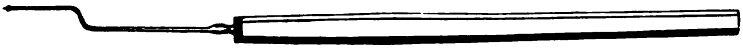


Fig. 83. Jaeger's Ophthalmostate.

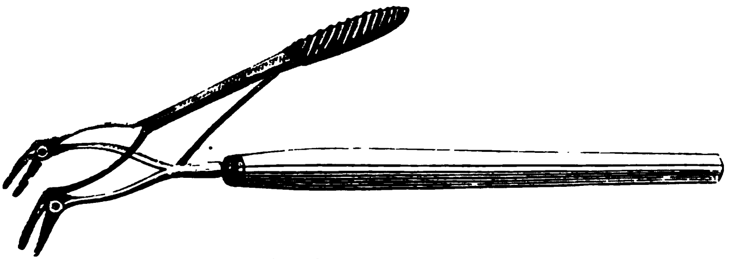


Fig. 84. Noyes' Ophthalmostate.

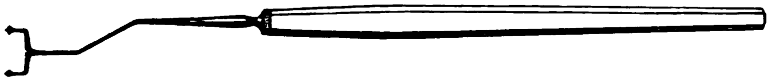
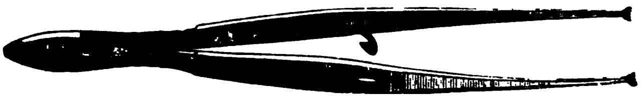


Fig. 85. Graefe's Fixation Forceps.



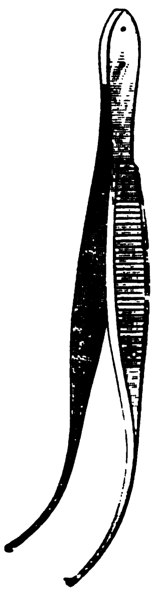
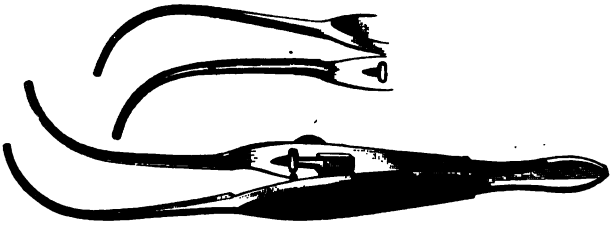


Fig. 81. Noyes' Fixation Forceps.

FIG. 85*b*. Carron de Villard's Lid Forceps, Right and Left.



KNAPP'S COMPLETE EYE SET No. 11.

2	Knapp's Eye Specula, right and left, ...	$5 00
2	Desmarre's Elevators, ...	3 50
2	Fixation Forceps;	4 00
1	Beer's Cataract Knife, ...	1 50
1	Graefe's Cataract Knife, concave, ...	1 50
1	Liebreich's Cataract Knife, concave, ...	1 50
1	Cystotome, with Daviel's Curette, ...	2 50
2	Iris Forceps, large and small, ...	3 50
1	Iris Scissors, curved on the flat, delicate, ...	1 50
1	Strabismus Scissors, ...	1 50
1	Large Silver Scoop, ...	2 00
2	Angular Iridectomy Knives, ...	3 50
1	Weber's Canalicula Knife, ...	1 50
1	Bowman's Stop Needle, straight, ...	1 25
1	Sickle Needle without Stop, ...	1 25
1	Foreign Body Needle, curved, ...	1 25
1	Knapp's Foreign Body Hook, silver, ...	2 25
1	Tyrell's Blunt Hook, soft shank, ...	1 25
4	Bowman's Probes, ...	3 00
2	Strabismus Hooks, ...	2 50
1	Ferguson's Needle and Artery Forceps, ...	3 00
2	Knapp's Entropium Forceps, neutral right and left, one for operation on the outside, one for inner side, ...	8 00
1	Jaeger's Lid Holder, hard rubber, ...	1 00
1	Agnew's Glass Syringe, ...	4 50
2	Bistouries, ...	3 00
1	Cilia Forceps, ...	1 25
6	Suture Needles and China bead Silk, ...	1 00
1	Test Drum, ...	50
1	Knapp's Caustic Holder, ...	1 00
1	Camels-hair Brush, mounted on one side with a piece of sulphate of copper, ...	25
1	Baader's Tattoeing-Needle, ...	2 00
1	Morocco-covered Case, lined with silk velvet, ...	7 00
	Amount, . . .	$78 25

EYE INSTRUMENTS.

INSTRUMENTS FOR REMOVING FOREIGN BODIES FROM THE EYE-BALL AND ORBIT.

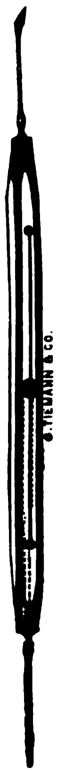


FIG. 94b. Pocket Spud and Needle.

FIG. 86. Dix's Spud.

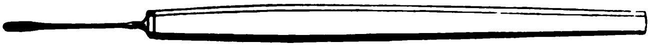


FIG. 87. Couching Needle.

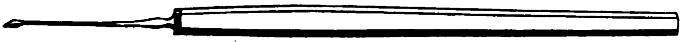


FIG. 88. Carron de Villard's Needle.

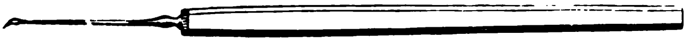


FIG. 89. Angular Needle.

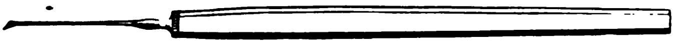


FIG. 90. Gouge.

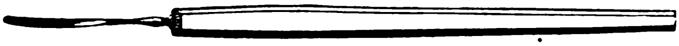


FIG. 91. Spatula.

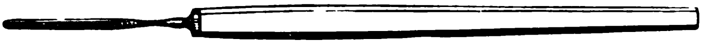


FIG. 92. Daviel's Curette.

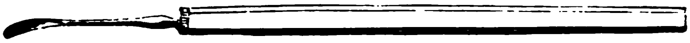


FIG. 93. Hard Rubber Spoon.

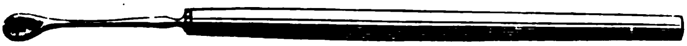
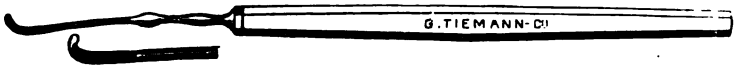


FIG. 94. Knapp's Foreign Body Hook.



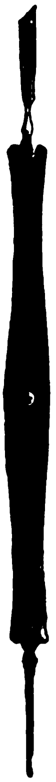


FIG. 94c. Pocket Gouge and Spatula.

FIG. 95. Agnew's Eye Douche.

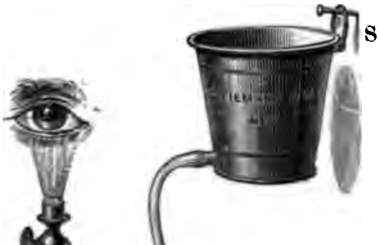


FIG. 95b. Stopcock for Eye Douche.

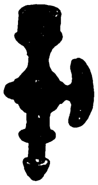


FIG. 95c. Eye-Bath Glass.

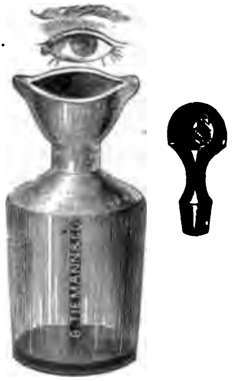
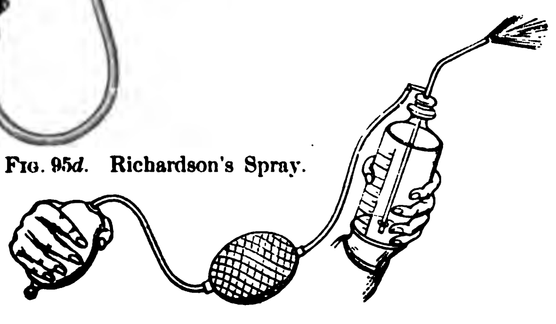


FIG. 95d. Richardson's Spray.



SNELLEN'S COMPLETE EYE SET No. 12.

1	Agnew's Canalicula Knife,	$1 75
1	Angular Keratome,	1 75
1	Straight Keratome,	1 50
3	Graefe's Linear Knives,	4 50
1	Small Strabismus Hook,	1 25
1	Large Strabismus Hook,	1 25
1	Knapp's Foreign Body Hook,	2 00
1	Silver Lens Scoop,	1 50
1	Hard Rubber Lens Scoop,	75
1	Agnew's Lachrymal Syringe, 2 points,	5 00
1	Test Drum,	50
1	Bowman's Grooved Director,	50
1	Set Bowman's Probes, button-pointed,	3 00
1	Anel's Probe,	50
1	Weber's Graduated Probe,	1 00
1	Hard Rubber Probe,	10
1	Skein black Eye Silk,	15
1	Dozen Eye Needles,	1 50
1	Beer's Knife,	1 50
1	Agnew's Tattoeing-Needle,	2 00
1	Curved Needle,	1 25
4	Straight Needles,	5 00
1	Tyrrell's Sharp Hook,	1 25
1	Tyrrell's Blunt Hook,	1 25
1	Bowman's Stop Needle,	1 25
1	Spud,	1 25
1	Daviel's Curette and Cystotome, flexible shank and angular bend, bayonet,	2 50
1	Graefe's Angular Iris Forceps,	1 75
1	Wecker's Iris Scissors,	10 00
1	Cilia Forceps,	1 25
1	Graefe's spring-catch Fixation Forceps, ordinary,	2 00
1	Graefe's spring-catch Fixation Forceps, very slender shank,	2 00
2	Desmarre's German Silver Retractors,	3 50
1	Jaeger's Hard Rubber Lid Holder,	1 00
1	Caustic Holder,	1 00
2	Knapp's Entropium Forceps,	8 00
1	Manoir's Canalicula Scissors,	1 50
1	Straight Iris Scissors,	1 50
1	Sand's Needle Forceps,	4 50
1	Enucleation Scissors, curved on flat,	1 50

1 Iris Forceps, straight, very fine, ...	$1 50
1 Strabismus Scissors, straight, button-pointed, . . .	1 50
1 Iris Scissors, curved on flat, ...	1 50
1 Iris Forceps, curved, ...	1 50
1 Noyes' Eye Speculum, Fig. 17, regular size, ...	4 50
1 Noyes' Eye Speculum, small size, ...	4 50
1 Morocco-covered Case, with tray in the bottom for eye instruments, and tray in the top for scissors and forceps, . .	15 00
Amount, . .	$115 25

INSTRUMENTS FOR OPERATING ON THE CONJUNCTIVA.

FIG. 96. Scissors Curved on the Flat.

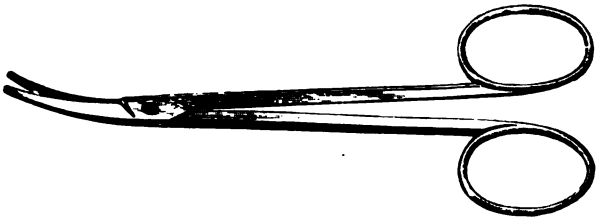
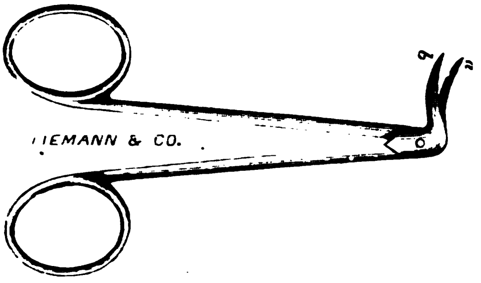


FIG. 97. Chadwick's Pterigium Scissors.



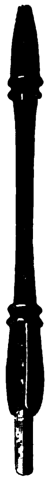


FIG. 97b. Knapp's Caustic Holder.

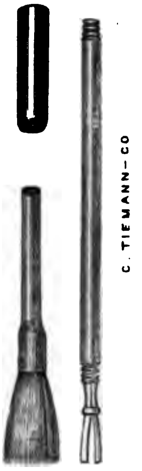


FIG. 97c. Child's Brush and Caustic Holder.

[See also Double Hook, Figs. 78 to 80; Scalpels, Figs. 54, 55, 56; Forceps, Figs. 80 to 85; Rubber Spatula for the application of Ointment; Hard Rubber and Silver, Silver and Platina Caustic Cases; Camel's-Hair Brushes, for applying Caustic Solutions, &c.]

INSTRUMENTS FOR PARACENTESIS CORNEÆ.

FIG. 98. Desmarre's Paracentesis Trocar.

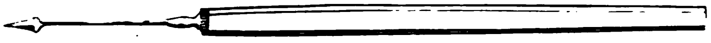


FIG. 99. Broad Paracentesis Needle.

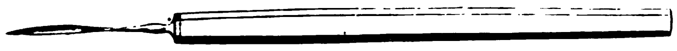
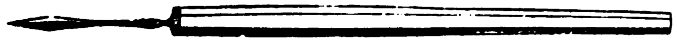


FIG. 101. Very Broad Paracentesis Needle.



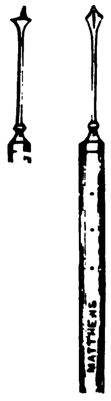


FIG. 100. Paracentesis Trocars.

EYE INSTRUMENTS.

IRIS INSTRUMENTS.

FOR ARTIFICIAL PUPIL, IRIDECTOMY, DISLOCATING THE NATURAL PUPIL, AND INCISION.

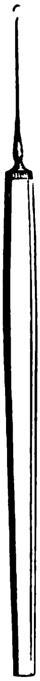


FIG. 107. Tyrrell's Sharp Hook.*

FIG. 102. Jaeger's Straight Keratome.

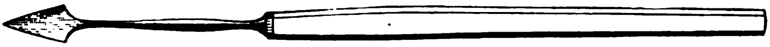


FIG. 103. Jaeger's Angular Keratome.

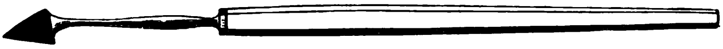


FIG. 104. Agnew's Iridectomy Knife.

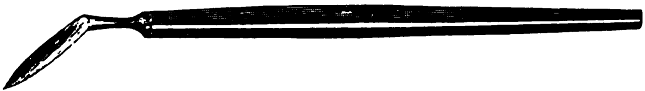


FIG. 105. Welker's Iridectomy Instrument.

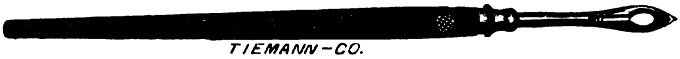


FIG. 105*b*. De la Rosa's Iris Needle.

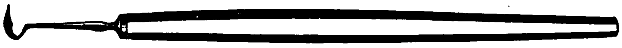
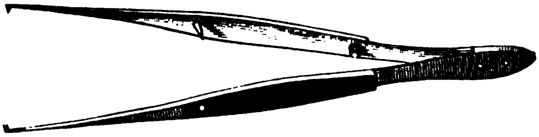


FIG. 106. Straight Iris Forceps.



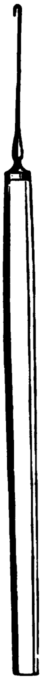


FIG. 108. Tyrrell's Blunt Hook.

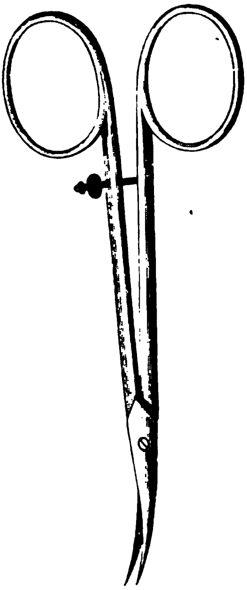


FIG. 109. Althof's Iridectomy Scissors.

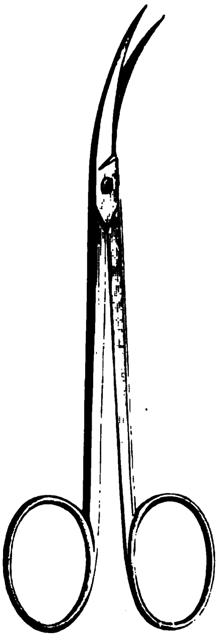


FIG. 110. Curved Iris Scissors.

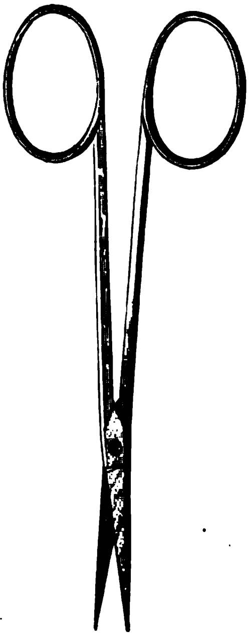


FIG. 111. Straight Iris Scissors.

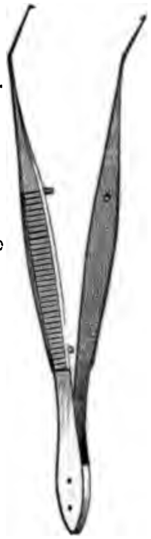


FIG. 112. Graefe's Angular Iris Forceps.

---

* Many other patterns of Iris Hooks on hand, such as Weber's Capsular Hooks, single and double, right and left curves.

EYE INSTRUMENTS.

INSTRUMENTS USED IN OPERATIONS FOR CATARACT.

FIGS. 113, 114, 115. Beer's Cataract Knives, three sizes.

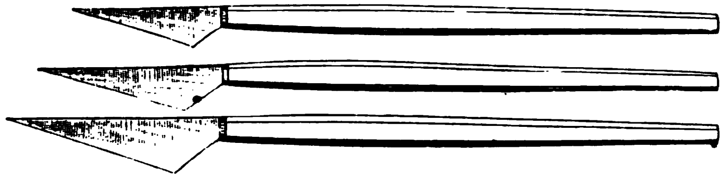


FIG. 116. Cystotome, for Lacerating the Capsule.

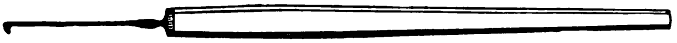


FIG. 117. Knapp's Cystotome.

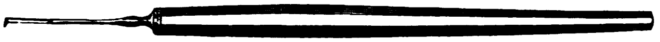


FIG. 118. Graefe's Linear Knife.

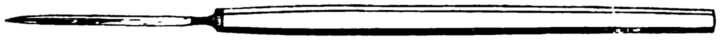


FIG. 119. Graefe's Tractor.

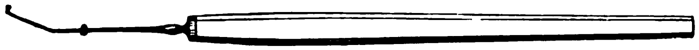


FIG. 120. Graefe's Lens Scoop.

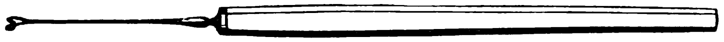


FIG. 121. Hard-Rubber or Shell Lens Spoon.

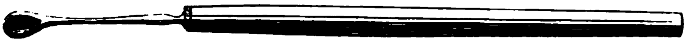


FIG. 122. Critchet's Hooked Needle.

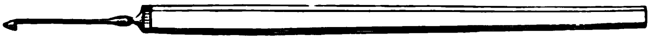


FIG. 123. Luzardi's Hooked Needle.

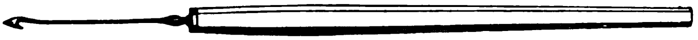


FIG. 124. Silver Lens Scoop and Cystotome.

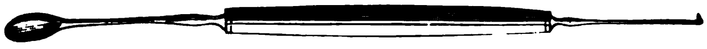


FIG. 125. Fenestrated Lens Scoop.

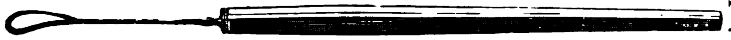


FIG. 125*b*. Critchet's Flat Lens Scoop.

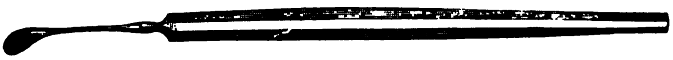


FIG. 125*c*. Critchet's Concave Lens Scoop.

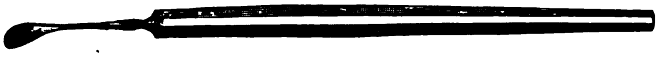
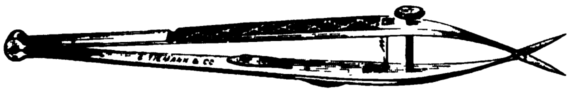


FIG. 126. Dudley's Cataract Scissors.



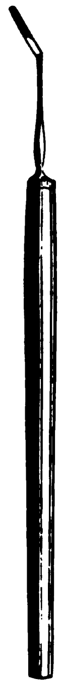


FIG. 127. Angular Bistoury, for Enlarging the Section.

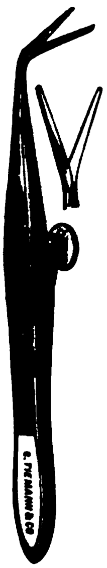


FIG. 127*b*. Wecker's Iridotomy Scissors.

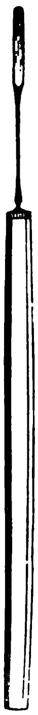


FIG. 128. Straight Knife, for Enlarging the Section.

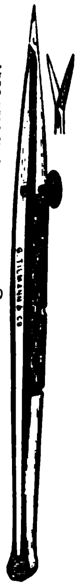


FIG. 128*b*. Strawbridge's Keratome Scissors.

EYE INSTRUMENTS.

INSTRUMENTS USED IN OPERATIONS FOR CATARACT.

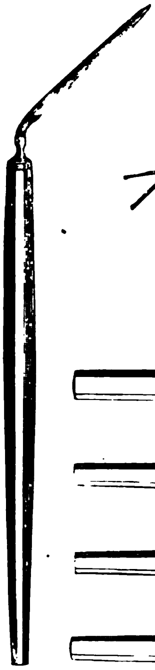


FIG. 129b. Baader's Linear Knife, curved to right.

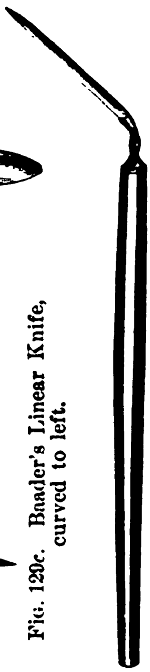


FIG. 129c. Baader's Linear Knife, curved to left.

FIG. 129. Lanne's Forceps-Needle, for False Membranes.

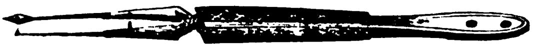


FIG. 130. Liebreich's Iris Forceps (latest).

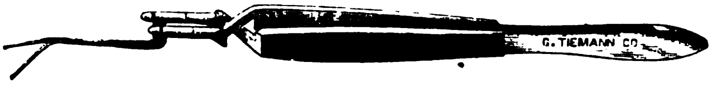


FIG. 131. Walton's Self-Holding Iris Forceps.

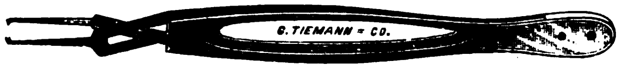


FIG. 132. Hayes' Knife-Needle.

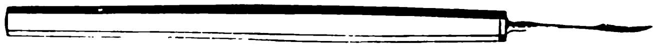


FIG. 133. Iris Knife.

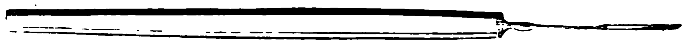


FIG. 134. Iris Knife with a Stop.

FIG. 135. Sickle-Shaped Iris Knife.

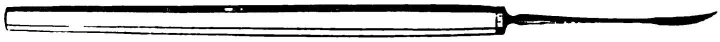


FIG. 136. Knife-Needle.

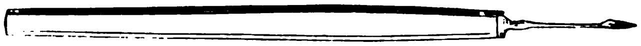
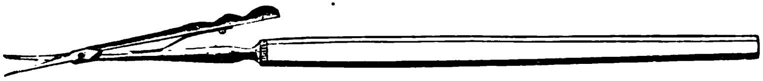


FIG. 137. Noyes' Iris Scissors.



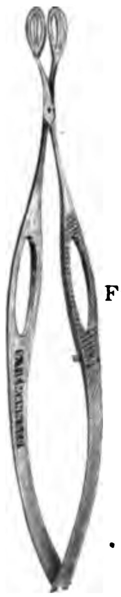


FIG. 140b. Lens and Foreign Body Forceps.

FIG. 138. Wilde's Canulated Needle.

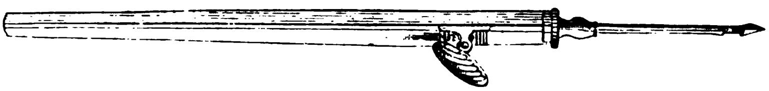


FIG. 139. Wilde's Canulated Forceps, Scissors, and Forceps-Needle, in one Handle.

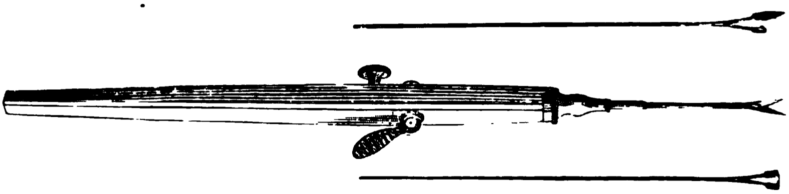
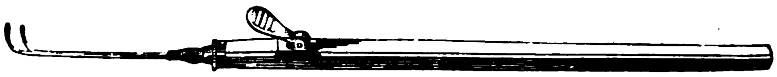


FIG. 140. Wilde's Canulated Forceps (Lithotriptor-like).



EYE INSTRUMENTS.

INSTRUMENTS USED IN OPERATIONS FOR CATARACT.

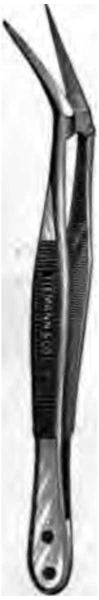


Fig. 141b. Hall's Iris Scissors.

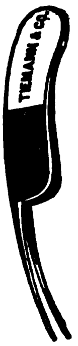


Fig. 141c. Fischer's Iris Forceps.

Fig. 141. Double-Edged Iris Knife.

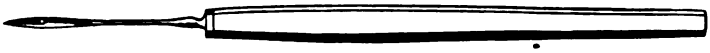


Fig. 142. Bowman's Stop-Needle.

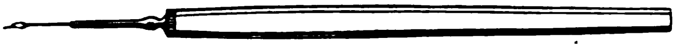


Fig. 143. Beer's Straight Cataract Needle.

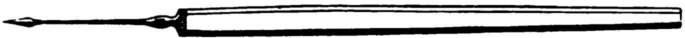


Fig. 144. Narrow Straight Cataract Needle.

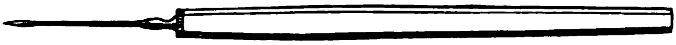


Fig. 145. Walton's Round-Pointed Needle.

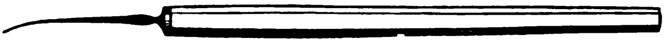


Fig. 146. Levi's Needle, with an Eye.

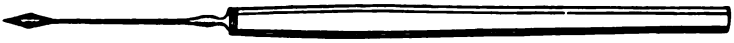
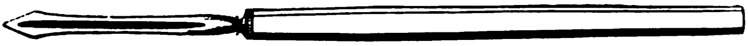


Fig. 147. Walton's Grooved Needle, for Soft Cataract.



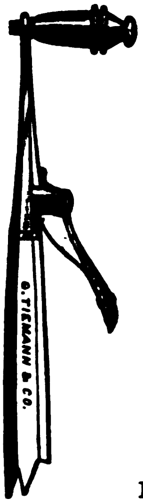


Fig. 150b. Agnew's Spring Tattoe.

Fig. 148. Tattoeing Needle (for the Coloring of White Spots in the Cornea).

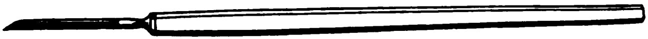


Fig. 149. Baader's Tattoeing Needle.

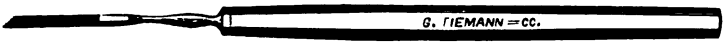


Fig. 150. Agnew's Tattoeing Needle.

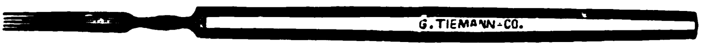


Fig. 151. Blanchet's Instrument for Exhausting Soft Cataract.

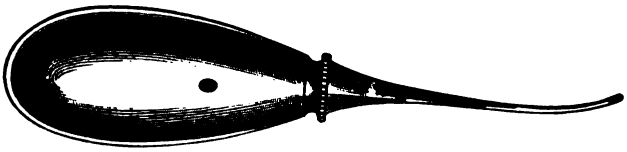
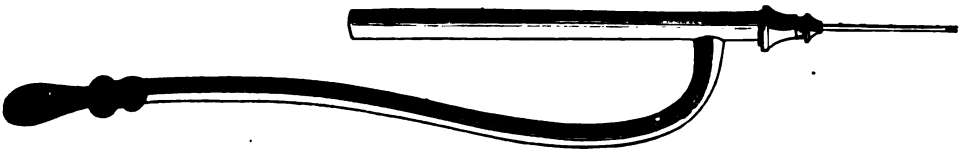
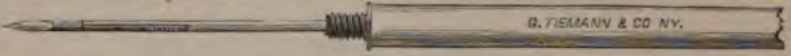


Fig. 152. Bowman's Instrument for Exhausting Soft Cataract.



EAR INSTRUMENTS.

Fig. 153. Ear Piercer, to Perforate the Lobe for the Insertion of Ear-rings.



INSTRUMENTS FOR THE EXAMINATION OF THE EXTERNAL MEATUS.

Fig. 154. Wilde's Ear Gorgeret.

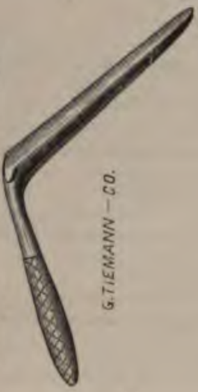


Fig. 155. Troeltsch's Ear Mirror.

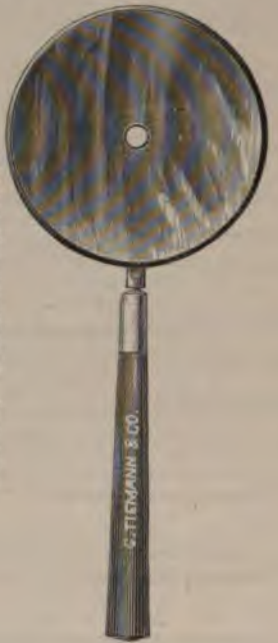


Fig. 156. Wilde's Tubular Specula and Case.

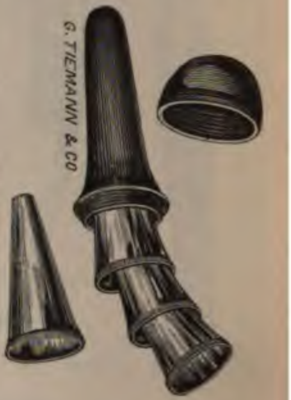


Fig. 157. Kramer's Speculum.

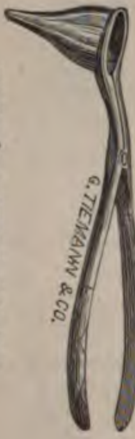


Fig. 158. Brunton's Otoscope.

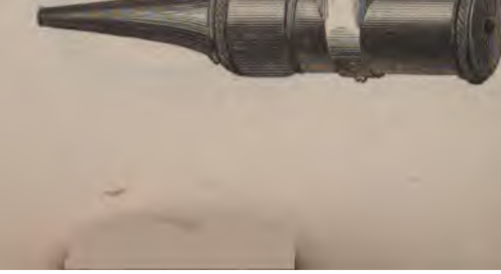
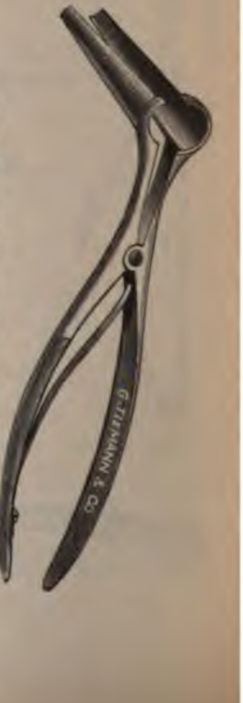


Fig. 159. German Silver Bivalve Speculum.



EAR INSTRUMENTS.

INSTRUMENTS FOR THE EXAMINATION OF THE EXTERNAL MEATUS.

FIG. 160. Clark's Otoscope.

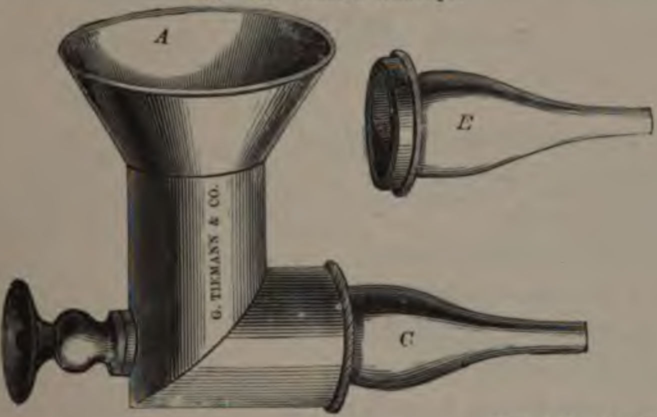
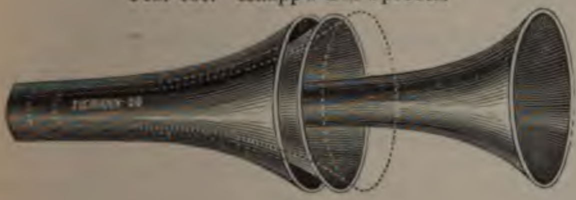


FIG. 162. Gruber's Specula of Hard Rubber.

FIG. 161. Knapp's Ear Specula.



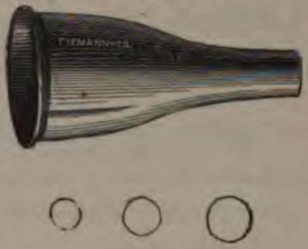


FIG. 163. Toynbee's Ear Specula.

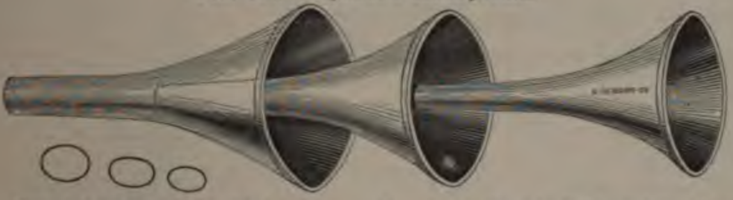
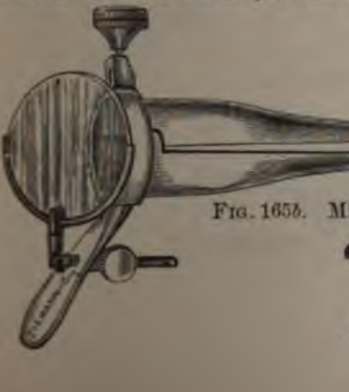


FIG. 164. Simrock's Otoscope, with Lens.

FIG. 165. Speir's Self-retaining Ear Speculum.



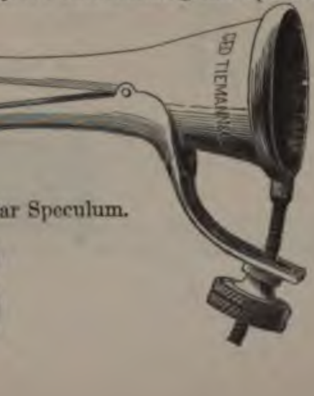
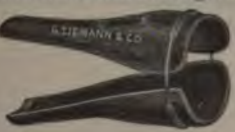


FIG. 165b. Milikin's Self-retaining Ear Speculum.



EAR INSTRUMENTS IN CASES.

POLITZER'S COMPLETE SET OF EAR INSTRUMENTS.

1 Reflector, with handle and headband, ...	$6 50
3 Hard-Rubber Ear Specula, ...	1 50
1 Hard-Rubber Curette, ...	1 00
1 Daviel's Curette, German silver, ...	1 50
1 Hook, for removing foreign bodies, ...	1 00
1 Polypus Knife, ...	1 25
1 Tympanum Perforator, angular, ...	1 50
1 Wilde's Angular Forceps, spring, ...	1 50
1 Pair of Polypus Forceps, ...	2 50
1 Wilde's Polypus Snare, ...	3 50
1 Pair of Eyelet Forceps and eight Eyelets (Politzer's), for insertion into the perforated tympanum, ...	3 75
3 Hard-Rubber Eustachian Catheters, ...	3 00
1 German Silver Eustachian Catheter, ...	1 50
1 Diagnostic Tube and Explorer, ...	2 50
1 Tuning Fork, ...	1 25
1 Ear Syringe, hard rubber, ...	1 25
1 Morocco-covered case, lined with velvet, ...	5 00
Amount, . .	$40 00

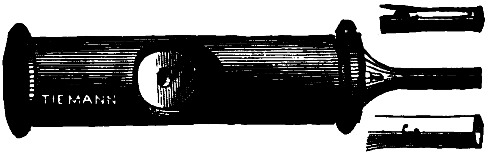


FIG. 166. Hassenstein's Otoscope.

EAR INSTRUMENTS.

INSTRUMENTS FOR OPERATING ON THE MEMBRANA TYMPANI, ETC.

FIG. 167. Toynbee's Artificial Tympanum.

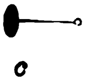


FIG. 168. Gruber's Sickle-shaped Polypus Knife.

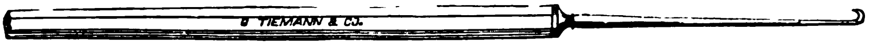


FIG. 169. Simrock's Scissors, for Operating on the Tympanum and Small Bones of the Ear.

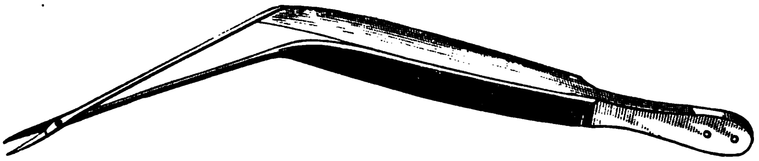


FIG. 170. Politzer's Tympanum Perforator, Angular.

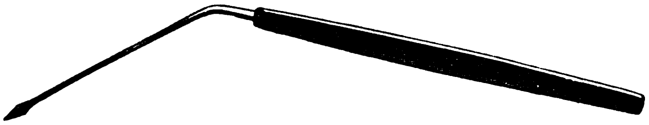


FIG. 171. Politzer's Tympanum Perforator, Straight.

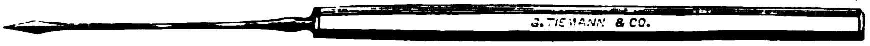


FIG. 172. Politzer's Forceps, for Introducing Eyelets into the Perforated Tympanum.

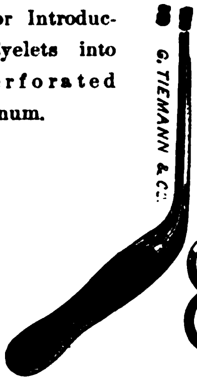


Fig. 173. Bonafont's Eustachian Catheter-Holder.

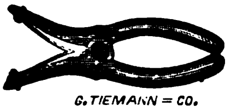


FIG. 174. Pomeroy's Kramer's Eustachian Catheter-Holder.

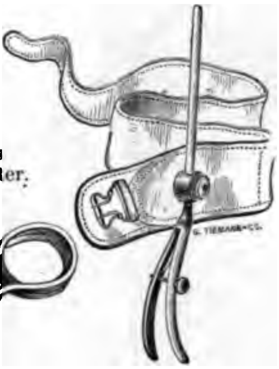


FIG. 174b. Wire Nose Clamps for holding the Eustachian Catheter.

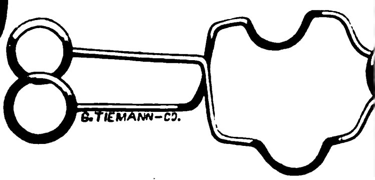


FIG. 175. Politzer's Meatus Knife.

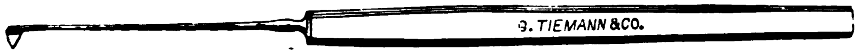
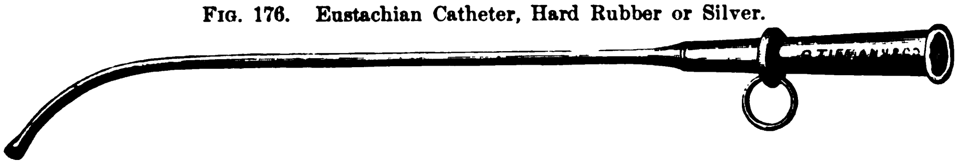


FIG. 176. Eustachian Catheter, Hard Rubber or Silver.



EAR INSTRUMENTS IN CASES.

POLITZER'S SMALL SET OF EAR INSTRUMENTS.

1	Troeltsch's Mirror, with handle,	$3 50
3	Hard-Rubber Ear Specula,	1 50
1	Hard-Rubber Curette,	1 00
1	Curette and Hook, steel,	1 00
1	Polypus Knife, steel,	75
1	Pair of Angular Forceps,	1 50
1	Wilde's Polypus Snare,	3 50
2	Hard-Rubber Eustachian Catheters,	2 00
1	Diagnostic Tube and Explorer,	2 50
1	Hard-Rubber Syringe,	1 25
1	Morocco-covered Case, lined with velvet,	3 50
	Amount,	$22 00

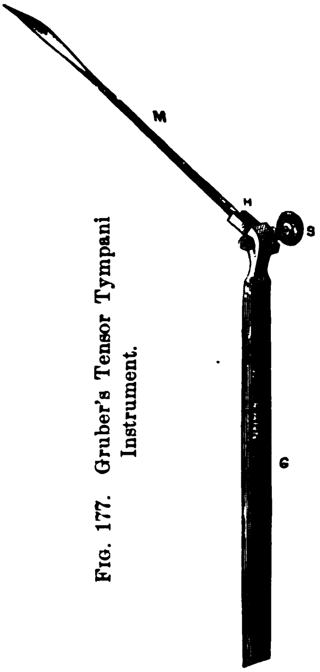


FIG. 177. Gruber's Tensor Tympani Instrument.

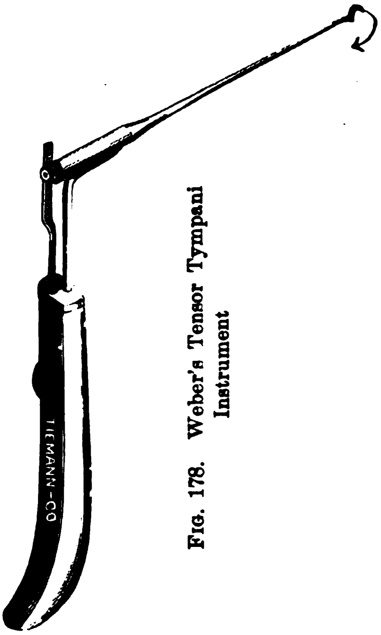


FIG. 178. Weber's Tensor Tympani Instrument

EAR INSTRUMENTS.

INSTRUMENTS FOR THE EUSTACHIAN CANAL.

FIG. 179. Politzer's Air-Bag, for Inflating the Eustachian Canal.

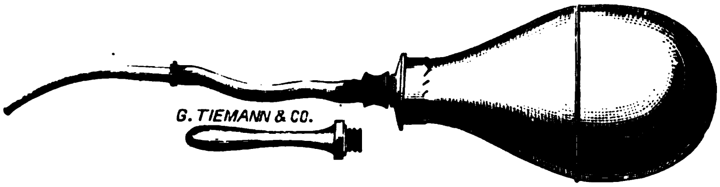


FIG. 180. Politzer's Air-Bag with Roosa's Attachment, for Treating Diseases of the Middle Ear.

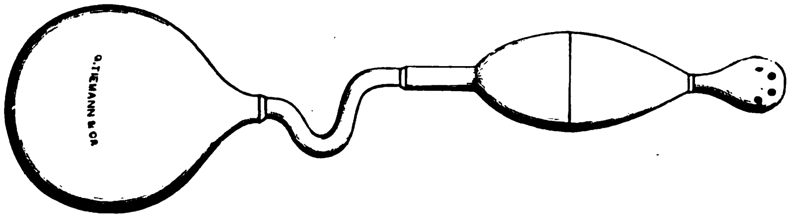


FIG. 181. Buttle's Inhaler, and for Forcing Medicated Vapors into the Eustachian Canal.

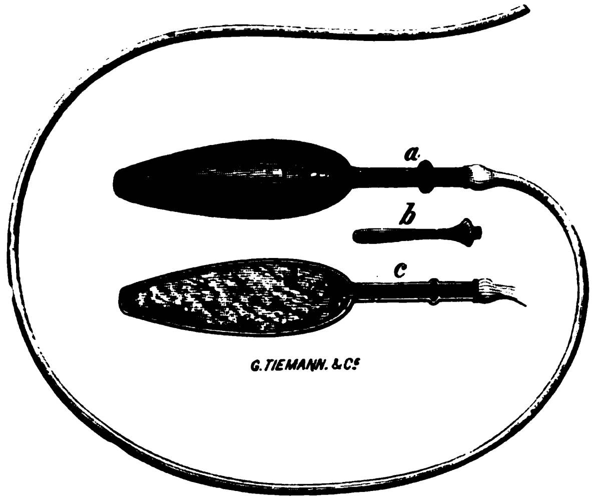
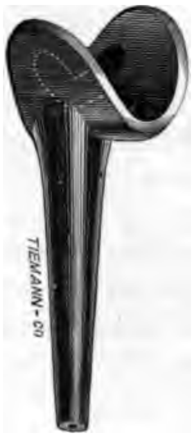


FIG. 182. Sexton's India-Rubber Nozzle for Politzer's Air-Bag.



Knapp's, Simrock's, Allen's, and other *Nozzles* for Politzer's Air-Bags.
Kramer's Air-Press to Order.

EAR INSTRUMENTS IN CASES.

TURNBULL'S SET OF EAR INSTRUMENTS.

1 Troeltsch's Ear Mirror, with handle and headband, . . .	$6 50
1 Set of (3) Rhinoscopic Mirrors, to fit one handle, . . .	4 50
1 Set of (3) Gruber's Tubular Specula, German Silver, in a case, to be carried in the vest-pocket, ...	3 50
1 Tuning Fork, to test the condition of the auditory nerve, . .	1 25
1 Explorer and Diagnostic Tube, pair, ...	2 50
1 Eustachian Catheter, hard rubber, small size, ...	1 00
1 Politzer's Apparatus, attachable to, ...	2 00
1 Capillary Spray, for injecting the middle ear, ...	3 00
1 Ear Syringe, hard rubber, ...	1 25
1 Turnbull's Curette, soft silver, ...	1 75
1 Turnbull's Angular Forceps, for removing foreign bodies, .	1 75
1 Turnbull's Sickle-shaped Knife and Curette, for opening furunculous abscess in the external meatus, ...	2 50
1 Ear Spout, ...	1 50
1 Clarke's Douche, for the ear and eye, ...	2 50
1 Wilde's Polypus Snare, ...	3 50
1 Probe, ...	35
1 Pair of Polypus Forceps, Politzer's, ...	3 00
1 Gruber's Tenotome, Fig. 177 (3 blades), ...	5 00
1 Politzer's Tympanum Perforator, ...	1 50
1 Catarrhal Syringe, posterior nares, ...	1 50
1 Pair Thudichum's Nasal Specula, r. and l., ...	1 50
1 Rauchfuss' Powder Blower, ...	2 50
1 Drill, for perforating mastoid cells, ...	8 00
1 Morocco-covered case, lined with velvet, ...	6 00
Amount, . .	$68 00

EAR INSTRUMENTS.

INSTRUMENTS FOR THE EUSTACHIAN CANAL.

Fig. 183. Fullgraff's Eustachian Spray.

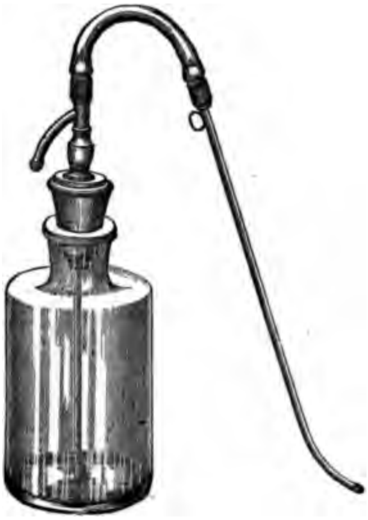
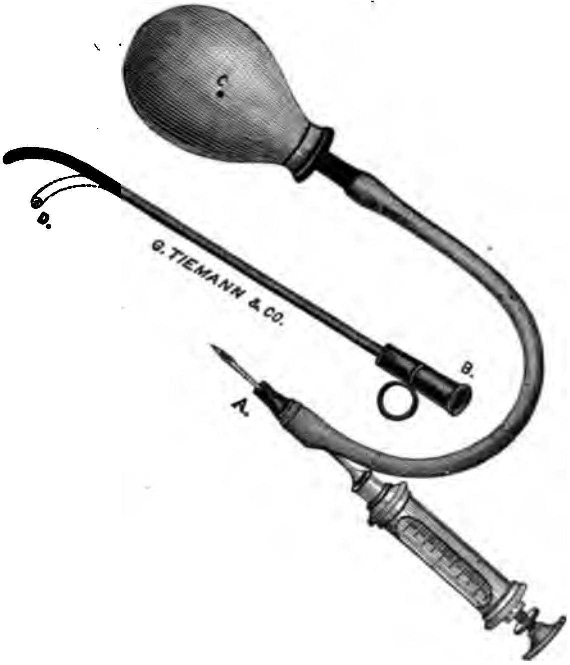


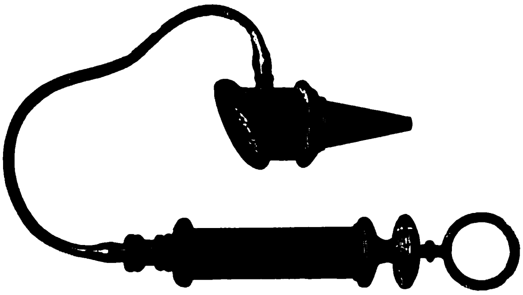
Fig. 184. Hackley's Instrument for Spraying the Eustachian Canal



ROOSA'S SET OF EAR INSTRUMENTS.

1	Troeltsch's Ear Mirror, with handle, and Roosa's Head-band, .	$6 50
1	Set of three Wilde's Tubular Specula, plated, . . .	3 00
1	Pair of Wilde's Angular Forceps, ...	1 75
1	Scalpel and Daviel's Curette, ...	2 50
1	Holcomb's Cotton Probe, ...	60
1	Eustachian Catheter, silver, ...	1 50
1	Eustachian Catheter, hard rubber, ...	1 50
1	Posterior Nares Syringe, hard rubber, ...	1 50
1	Ear Syringe, hard rubber, ...	1 25
1	Roosa's Iodine Apparatus, ...	2 50
6	Toynbee's Artificial Tympanii, 30c., ...	1 80
1	Diagnostic Tube and Explorer, ...	2 50
1	Tuning Fork (C), ...	1 25
1	Siegle's Pneumatic Otoscope, ...	5 00
1	Small Powder-Blower, hard rubber, ...	1 25
1	Set of Blake's Ear Snares and Paracentesis Needle, . .	5 50
1	Morocco-covered Case, lined with velvet, ...	3 50
		$43 40
	And 1 Politzer's Apparatus, in a separate paper box, . .	$2 00

Fig. 184*b*. Ely's Modification of Siegle's Otoscope.



EAR INSTRUMENTS.

DIAGNOSTIC INSTRUMENTS.

FIG. 185. Ear Probe, Steel, Angular.

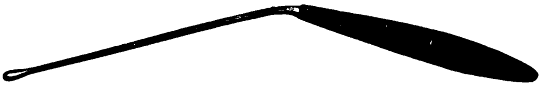


FIG. 186. Politzer's Ear Manometer.

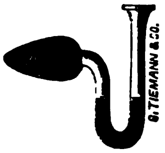


FIG. 187. Toynbee's. Diagnostic Tube.

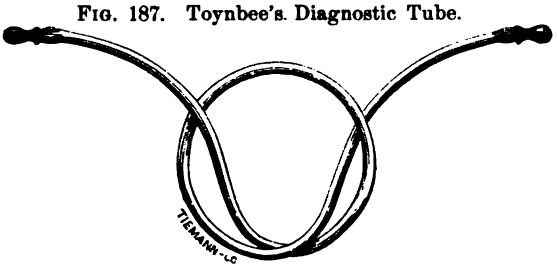
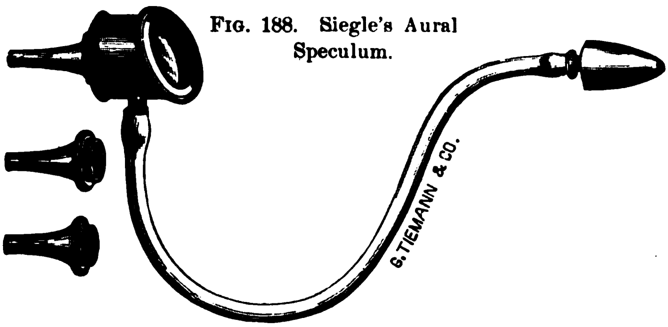


FIG. 188. Siegle's Aural Speculum.



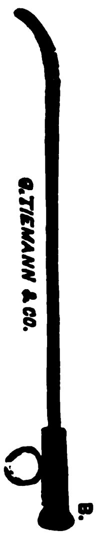


FIG. 190. Eustachian Catheter.

FIG. 189. Toynbee's Explorer. (Made to fit Fig. 190.)

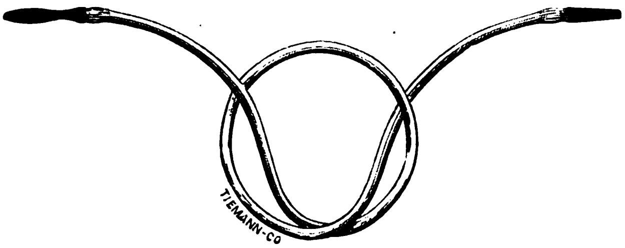


FIG. 191. Conversation Tube.

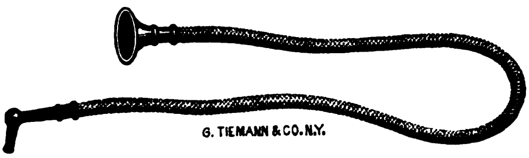


FIG. 192. Tuning Fork (Diapason).

EAR INSTRUMENTS.

FIG. 193. Blake's Inner-Ear Mirror.

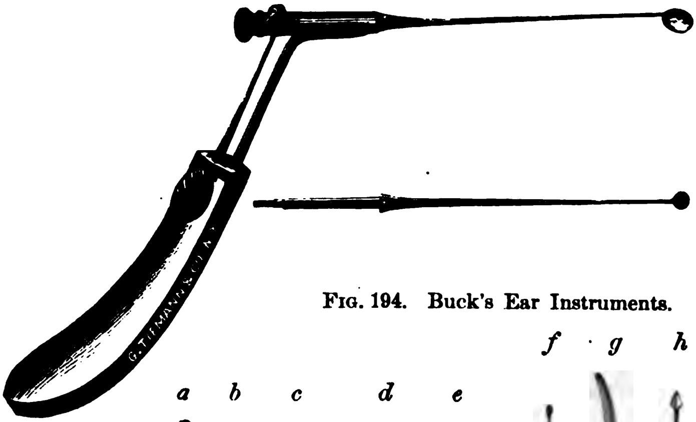

G. TIEMANN & CO. N.Y.

FIG. 194. Buck's Ear Instruments.

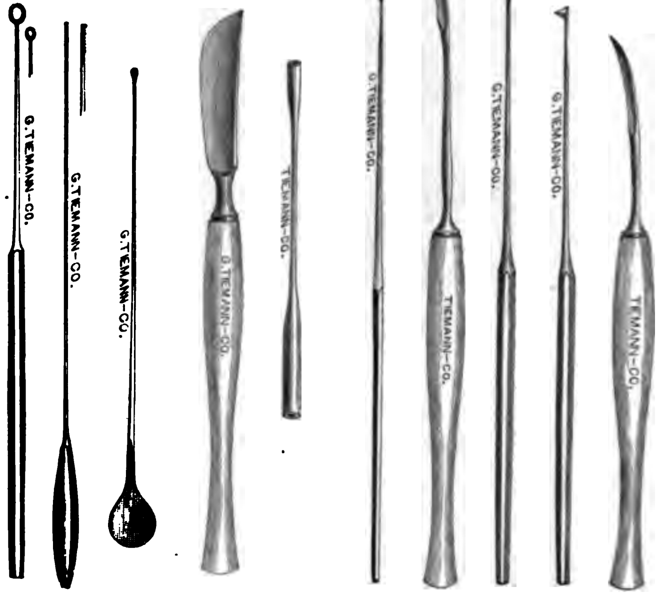
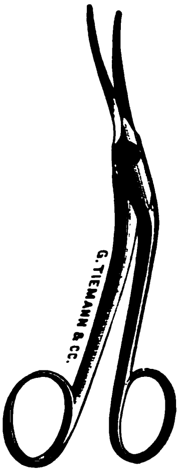

a
b
c
d
e
f
g
h
i
k
G.TIEMANN-CO.
G.TIEMANN-CO.
G.TIEMANN-CO.
G.TIEMANN-CO.
TIEMANN-CO.
G.TIEMANN-CO.
TIEMANN-CO.
G.TIEMANN-CO.
G.TIEMANN-CO.
TIEMANN-CO.

FIG. 193½. Gruber's Scissors.


G. TIEMANN & CO.

DR. ALBERT H. BUCK'S EAR INSTRUMENTS. (FIG. 194.)

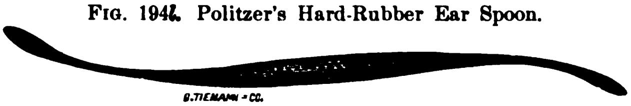
a. Curette.
b. Cotton Holder.
c. Silver Probe.
d. Mastoid Process Knife.
e. Port-Acid Glass.
f. Silver Probe.
g. Blunt-pointed Curved Bistoury.
h. Maryngotome.
i. Furuncle Knife.
k. Sharp-pointed Curved Bistoury.

For Buck's Case of Ear Instruments. (See page 46.)

EAR INSTRUMENTS.

INSTRUMENTS FOR REMOVING FOREIGN BODIES, FLAKES OF EPIDERMIS, WAX, HAIRS, POLYPI, FLUID SECRETIONS, ETC.

FIG. 194b. Politzer's Hard-Rubber Ear Spoon.



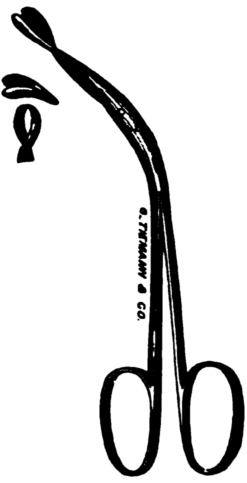
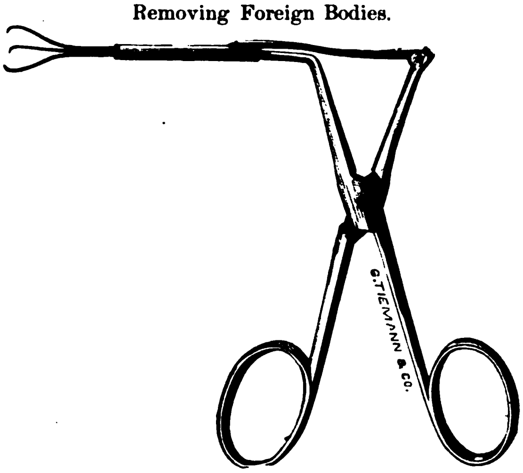


FIG. 196. Politzer's Polypus Forceps.

FIG. 195. Allen's Polypus Forceps, and for Removing Foreign Bodies.



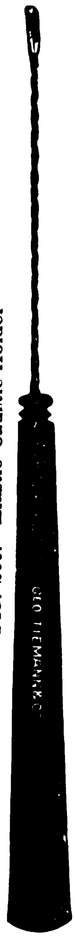
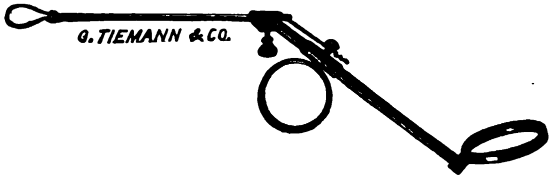


FIG. 200. Elastic Caustic-Holder

FIG. 197. Blake's Polypus Snare.



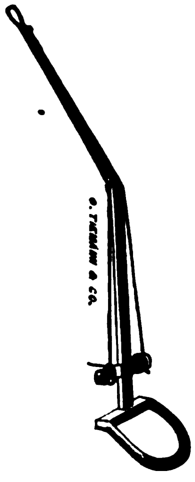


FIG. 198. Wilde's Polypus Snare.

FIG. 199. Bumstead's Canulated Forceps.

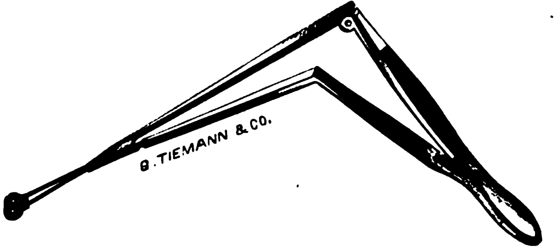


FIG. 201. Speir's Ear Curette.

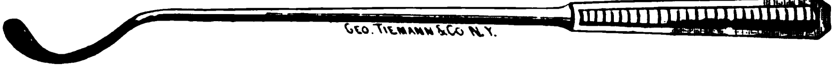
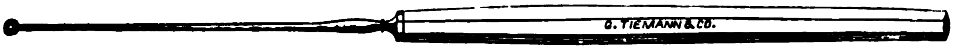


FIG. 202. Fenestrated Ear Scoop.



BUCK'S SET OF EAR INSTRUMENTS.

2 Curettes, 75c.,	$1 50
4 Cotton Holders, 50c.,	2 00
1 Silver Probe (*c*),	60
1 Mastoid Process Knife,	1 50
1 Port Acid Glass,	15
1 Silver Probe (*f*),	75
1 Blunt-pointed Curved Bistoury,	1 50
2 Maryngotomes, $1.00,	2 00
1 Furuncle Knife,	1 50
1 Sharp-pointed Curved Bistoury,	1 50
2 Drills for Mastoid Process,	3 00
1 Mirror, 2¾ inch diameter, and Head-Band,	5 00
1 Wild's Ear Forceps, very delicate,	1 50
1 Blake's Snare, silver canula, only one hole to receive No. 37 wire doubled,	3 00
1 Set of 4 Wild's Ear Specula, silver,	4 50
1 Fine Morocco Case, silk velvet lining,	5 00
Amount,	$35 00

INSTRUMENTS FOR REMOVING FOREIGN BODIES.

FIG. 203. Angular Ear Hook.

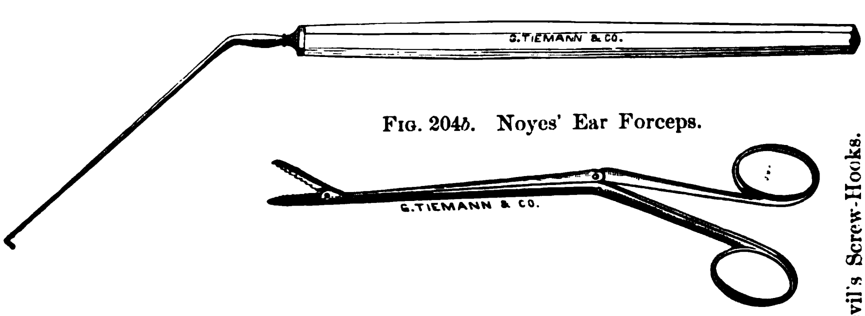


FIG. 204*b*. Noyes' Ear Forceps.

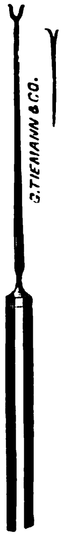


FIG. 204. Devil's Screw-Hooks.

FIG. 205. Elsberg's Angular Screw-Hook.

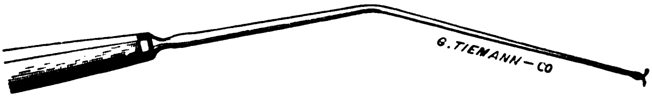
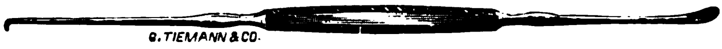


FIG. 206. Gross' Ear Spoon and Hook.



EAR INSTRUMENTS.

FIG. 207. Hinton's Polypus Forceps.

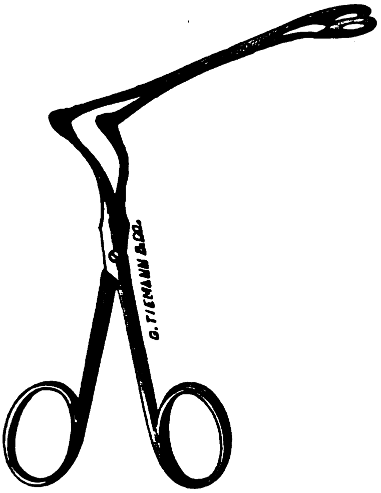


FIG. 207*b*. Hinton's Double-jointed Polypus Forceps.

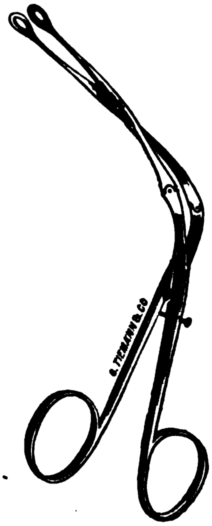


FIG. 207*c*. Pomeroy's Ear Forceps.

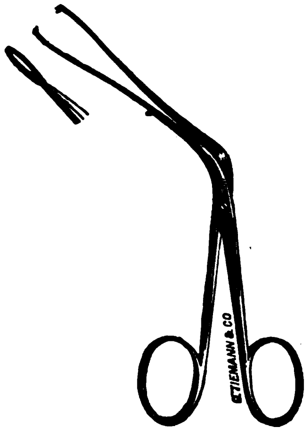


FIG. 207*d*. Tiemann & Co.'s Ear Forceps and Reflector.

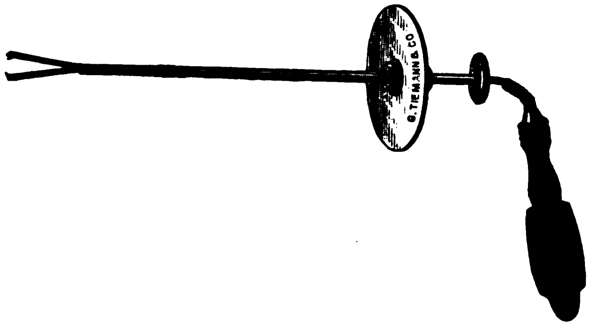


FIG. 207*e*. Tiemann & Co.'s Universal Ear Forceps.

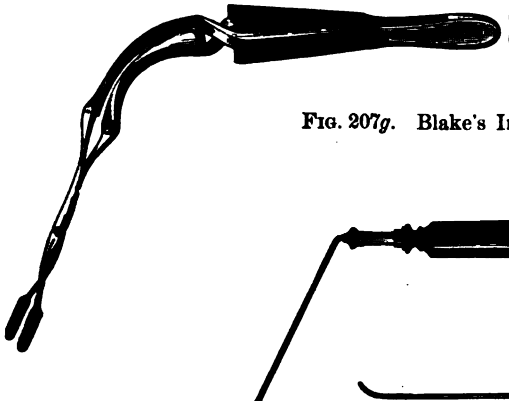


FIG. 207*f*. Avery's Ear Forceps.

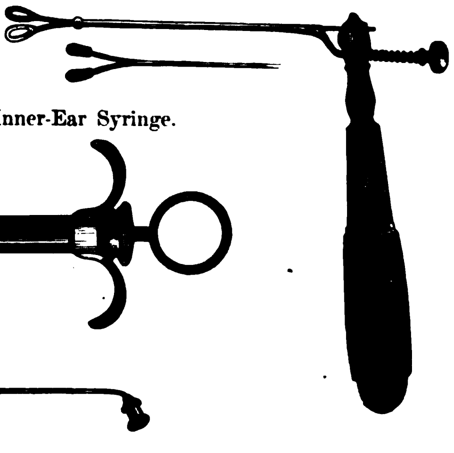
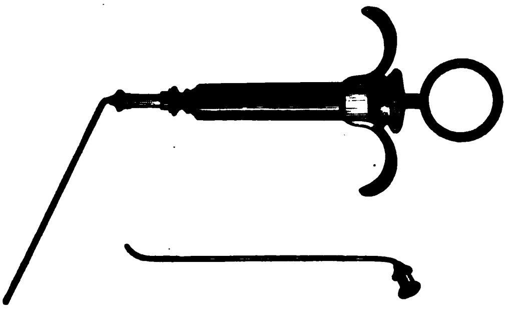


FIG. 207*g*. Blake's Inner-Ear Syringe.



SPEIR'S SET OF EAR INSTRUMENTS.

1 Tympanum Perforator,	$1 50
1 Eustachian Cauterizer,	1 50
1 Speir's Ear Scoop (Curette),	1 00
1 Virgin Silver Eustachian Catheter,	2 00
1 Hook for Removing Foreign Bodies,	1 50
1 Speir's Self-retaining Ear Speculum,	4 50
1 Hard Rubber Ear Syringe,	1 25
1 Wilde's Angular Forceps,	1 75
1 Wilde's Ear Polypus Snare,	3 50
1 Pair of Plain Slender Forceps,	1 00
1 Lens and Frame, 2″ focus,	2 00
1 Speir's Ear Cleaner,	75
1 Pair of Small, Straight Scissors,	1 50
1 Tympanum Manometer,	2 50
1 Speir's Aural Reflector,	4 50
1 Ear Probe,	60
6 Toynbee's Artificial Tympana, 30c.,	1 80
1 Glass Brush,	40
1 Coil of Silver Wire,	50
2 Atropine Glasses, 20c.,	40
1 Morocco Case, lined with silk velvet,	6 00
Amount,	$40 45

TOYNBEE'S SET OF EAR INSTRUMENTS.

3 Silver Ear Specula (Toynbee's),	$5 50
1 Pair of Rectangular Forceps,	1 75
1 Metallic Syringe with two Rings (or hard rubber),	1 50
1 Ear Spout,	1 50
1 Wilde's Polypus Snare,	3 50
1 Pair of Ring Polypus Forceps,	2 00
4 Artificial Tympana,	1 20
1 Otoscope (Diagnostic Tube) and Explorer,	2 50
1 Eustachian Catheter, hard rubber,	1 00
1 Morocco-covered Case, lined with velvet,	2 75
Amount,	$23 20

EAR INSTRUMENTS.

FIG. 210. Lucae's Reflux Ear Douche

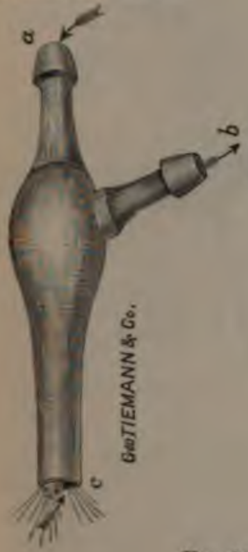


FIG. 208. Eiterbecken (Pus Basin), Brass.

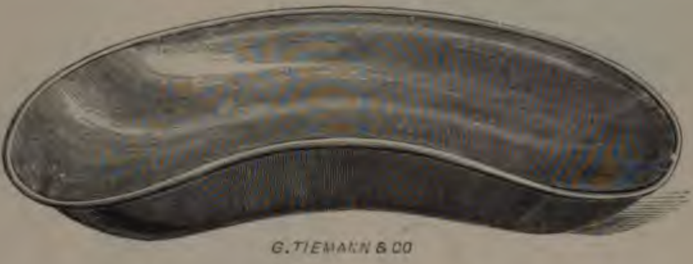


FIG. 209. Pus Basin, Hard Rubber or Tin.

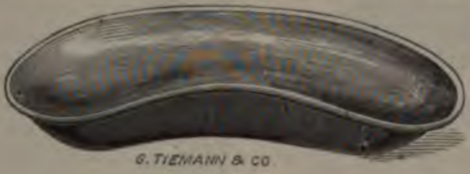


FIG. 210b. Donder's Ear Spout.

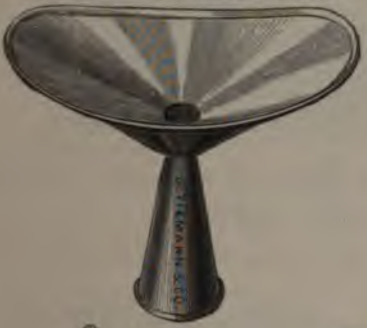


FIG. 211. Up de Graff's Ear Spout.

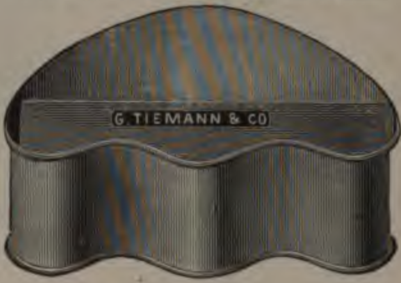


FIG. 212. Knapp's Powder-Blower.

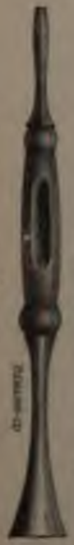


FIG. 212b. Bag Ear Syringe.

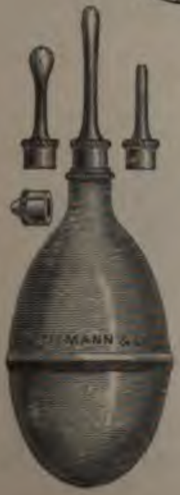


FIG. 213. Kramer's Ear Syringe.

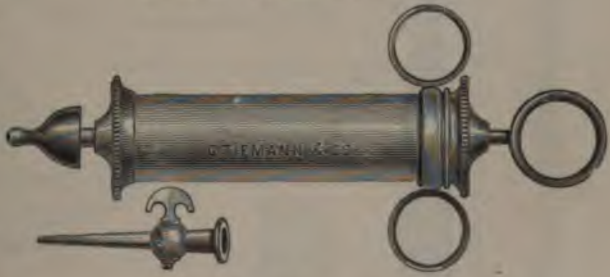


FIG. 214. Hard Rubber Ear Syringe.

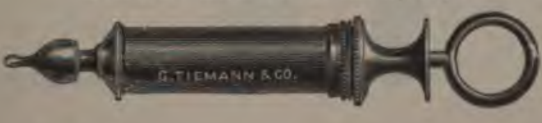

G. TIEMANN & CO.

FIG. 215b.
Hosner's Ear Spout.

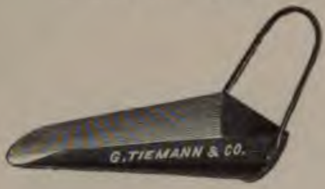

G. TIEMANN & CO.

FIG. 215. Sexton's Ear-Douche.

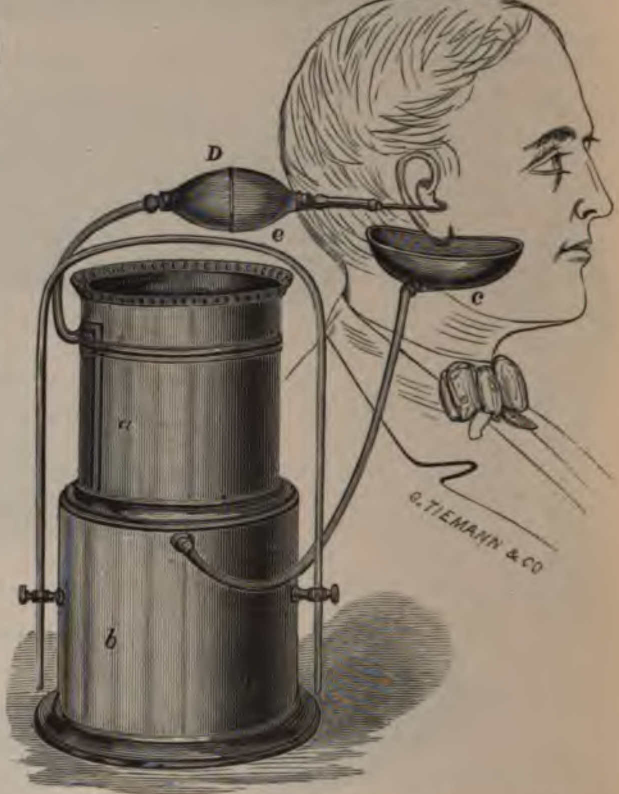


FIG. 215c.
Ear Spout and Hose.

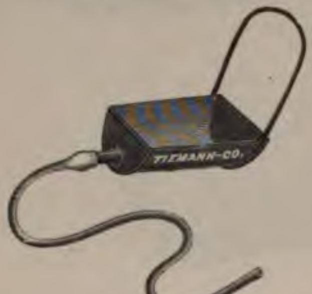
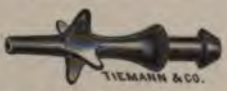
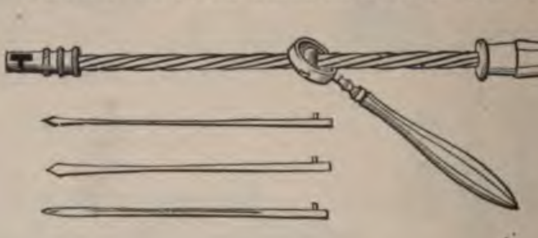


FIG. 215d.
Buck's Ear Nozzle.



FOR PERFORATING THE MASTOID PROCESS AND FOR THE REMOVAL OF NECROSED BONE.

FIG. 216. Drill with Guard, for Perforating the Mastoid Process.


G. TIEMANN-CO.

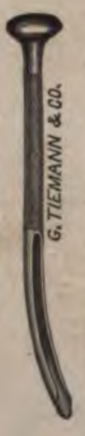

G. TIEMANN & CO.

FIG. 218. Hand-Gouge.

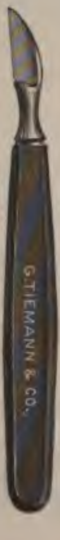

G. TIEMANN & CO.

FIG. 218b. Burnett's Knife, for Mastoid Process.

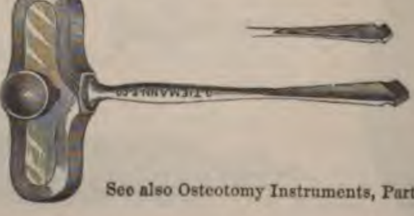


FIG. 216b. Buck's Drills.

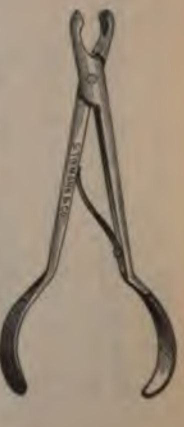


FIG. 217. Post's Rongeur.

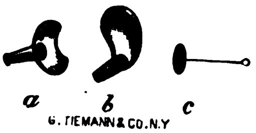
See also Osteotomy Instruments, Part I.

EAR TRUMPETS.

A DESCRIPTION OF MECHANICAL APPLIANCES FOR IMPROVING THE CONDITION OF THE DEAF, BY ENABLING THEM TO HEAR MORE DISTINCTLY THE HUMAN VOICE, MUSIC, AND SOUNDS GENERALLY.

IN view of the very limited remarks on Ear Trumpets, even by the best authors on *Aural Surgery*, and in answer to the many inquiries respecting them, we will attempt to describe in these pages the most useful kinds, hoping thereby to meet the wishes of many of our friends who have addressed us on that subject.

FIG. 219.

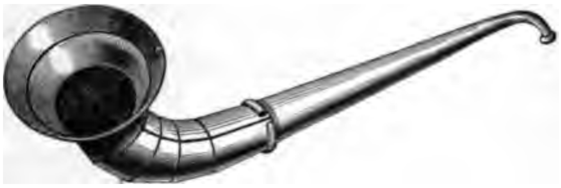


The smallest auricular or Hearing Instruments are *Silver Cornets*, Fig. 219, *a*, *b*. They will prove efficient in cases of obstruction of the *meatus auditorius*, by reason of contraction, or the presence of polypii. Keeping the canal open, and admitting air to the tympanum, they will sometimes start its dormant functions. As they come in contact with inflamed or otherwise diseased structures, they ought to be made of gold or silver, and never of inferior metal. Fig. 219, *c*, represents an

ARTIFICIAL TYMPANUM.

In order to diminish the evil results occurring from perforation of the drum, it has been recommended by Toynbee, of London, to insert an artificial one, and thus close the opening. The instrument consists of a thin plate of vulcanized India-rubber, about one centimeter in diameter, in the centre of which a fine silver wire, about an inch long, is fastened. This wire has a ring on its outer end, by which it can be easily removed. This artificial membrane is pressed against the remains of the natural one, causing sometimes truly a magical effect. (Vide Toynbee on Diseases of the Ear, Philadelphia ed., page 191 and others.) Patients should never apply them, before they are properly instructed by their physicians.

FIG. 220.

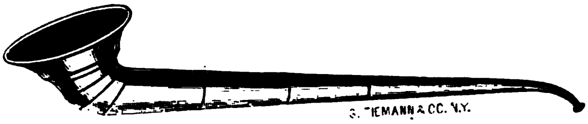


EAR TRUMPETS.

So called on account of their similarity in form to the well-known musical instrument, but, in principle, the very reverse; for, whilst the latter produces and emits sound (air waves), the *Ear Trumpet*, on the contrary, absorbs, concentrates, and conducts it. They are made in various forms, and may be said to consist of three parts:

EAR TRUMPETS.

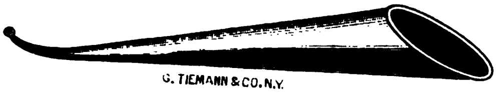
FIG. 221.



G. TIEMANN & CO. N.Y.

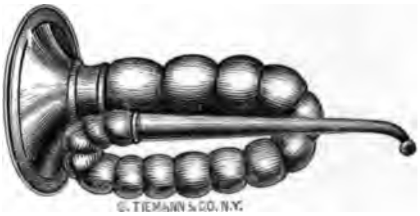
The mouth, the neck, and the ear piece. The mouth, or large opening, is turned toward the speaker. The larger this part of the instrument is, the greater its power will be. The neck, conical in shape, connects the mouth to the ear-piece.

FIG. 222.



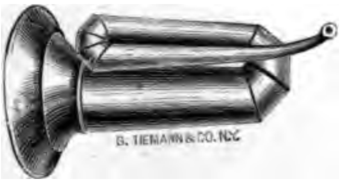
G. TIEMANN & CO. N.Y.

FIG. 223.



G. TIEMANN & CO. N.Y.

FIG. 224.



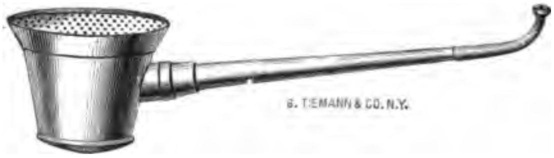
G. TIEMANN & CO. N.Y.

The neck may be made of various lengths; in a straight line, also in curves, or angles, without impairing the power of the instrument. The *Ear-piece* is simply the small, well-rounded open extremity, of proper size to fit the auditory canal.

THE DIPPER TRUMPET,

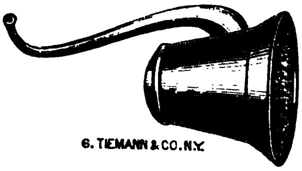
Fig. 225, is the most powerful instrument, best adapted to hear public lectures, or sermons, and will be found efficient where the smaller-sized trumpets have failed.

FIG. 225.



G. TIEMANN & CO. N.Y.

FIG. 226.

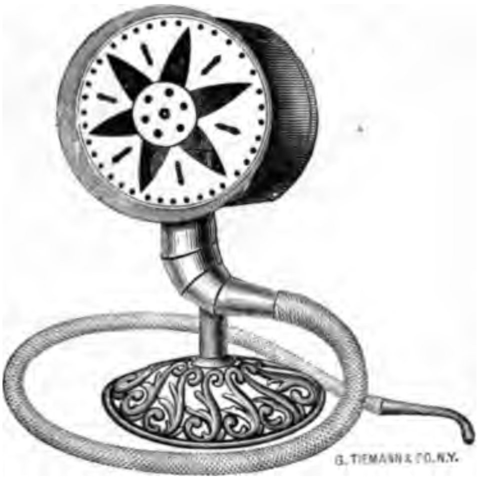


G. TIEMANN & CO. N.Y.

They differ from the ordinary Trumpet in shape and construction. The mouth-piece is closed by a perforated metal plate. The neck is at a right angle to it and reaches clear inside, in a curved line, nearly striking the bottom. Air waves passing through the little apertures of the mouth-piece, will touch the bottom, which, being in form of a parabola, reflects them toward a common centre. This common centre is the neck of the instrument. All of the waves being forced into this channel and conducted to the ear, will operate with increased power. Like the common Trumpet, they are made in various forms to suit the fancy of the patient. (Figs. 225, 226, 227.) The power of the instrument is not dependent on its form, but bears minute relations to size, increasing or diminishing with the other.

EAR TRUMPETS.

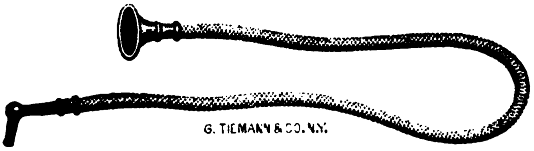
FIG. 227.


G. TIEMANN & CO. N.Y.

THE EAR OF DIONISIUS.

This instrument is constructed on the Dipper principle. The mouth-piece is of rather large proportions, varying from eight inches to one foot in diameter. It rests on an iron base, on a swivel, so that the opening of the mouth can be turned easily to any direction. The neck is a long, tapering, elastic tube, the collapsing of which is prevented by a spiral wire inside, and is overspun with silk or mohair. The ear-piece is made of horn, hard rubber, or ivory. It is intended for the use of VERY deaf persons, who wish to hear the general conversation in their parlor, or who desire to attend public lectures, church, or concerts. The instrument is placed on the floor, near the patient's seat, and the mouth directed toward the speaker, while the ear-piece is held in place by the patient. The dipper-shaped instrument will reward the person accommodating himself to its rather awkward form, as the sound is conveyed by means of it more distinctly than by any other instrument.

FIG. 228.


G. TIEMANN & CO. N.Y.

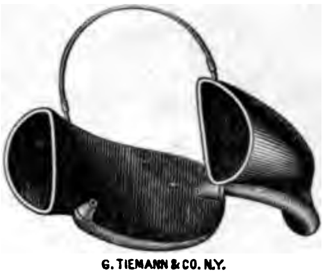
THE CONVERSATION TUBE

is of the same general construction as the trumpet. The mouth-piece is small, about two inches in diameter. The neck, about a yard or more in length, is made of spiral wire covered with India-rubber, and overspun with mohair or silk, being very flexible, and terminating again in the ear-piece. This instrument will convey the merest whisper, so that a third person can not hear the conversation carried on by means of it. It may be worn suspended around the neck, or rolled up and put into the pocket, but it is not so well adapted for general use as the Trumpet, being more in-

EAR TRUMPETS.

tended for use among friends and members of a family. The person who wants to convey his thoughts to his deaf friend speaks through the bell-shaped opening at one end, whilst the deaf person holds the other end to his ear. The tubes are sometimes made eight to twelve feet long, so that the mouth-piece may be passed around a whole circle of friends, without obliging any one of them to leave his seat.

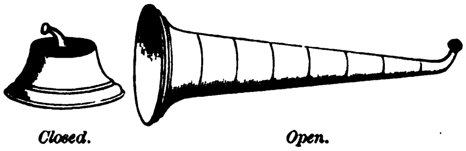
FIG. 229.


G. TIEMANN & CO. N.Y.

THE AURICLES

consist of two Ramshorn-shaped trumpets, connected by an adjustable spring, passing over the crown of the head. They are flattened on one side in order to fit closer. The mouth-piece, being above the ear, is pointed forward ; the neck passing back and downward close to the ear, *tapering* toward the ear-piece, which is made of soft rubber or ivory. They are very *easily concealed*, especially by ladies, who can dress their hair over them, and are most desirable for such persons who wish to hear and carry on general conversation without being necessitated to use the *Trumpet;* for instance, Lawyers, Ministers, Teachers, Shop-keepers, and others.

FIG. 230.



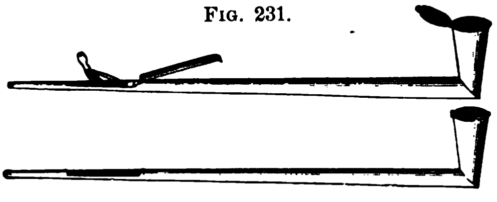
Closed. *Open.*

TELESCOPIC TRUMPETS,

very portable, and trumpets in the shape of

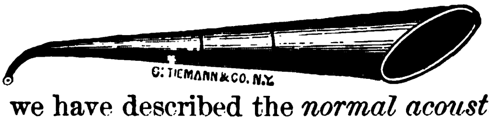
WALKING CANES,

FIG. 231.



and numerous other forms of more or less merit have been made.

FIG. 232.


G. TIEMANN & CO. N.Y.

In the foregoing, we have described the *normal acoustic instruments* to aid in hearing. *All magnify* and *increase* sound, but in the same way as a person obliged to use *spectacles* will have to suit the focus to his eye, so a deaf person will find one trumpet better suited to his special case than another.

NASAL INSTRUMENTS.

FIG. 233. Robert & Collins' Nasal Speculum.

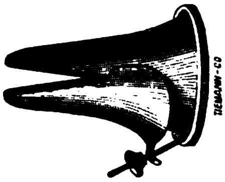


FIG. 233*b*. Goodwillie's Nasal Speculum.

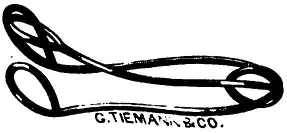


FIG. 234. Bivalve Nasal Speculum. German Silver.

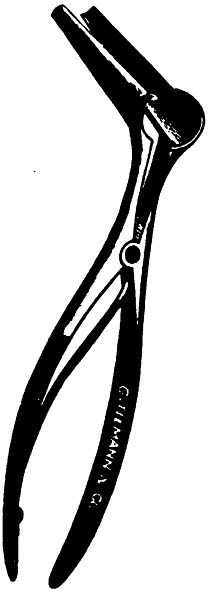


FIG. 235. Elsberg's Nasal Speculum.

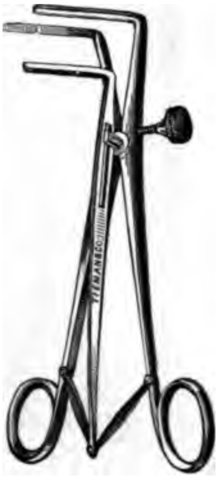


FIG. 236. Steel Nasal Speculum.

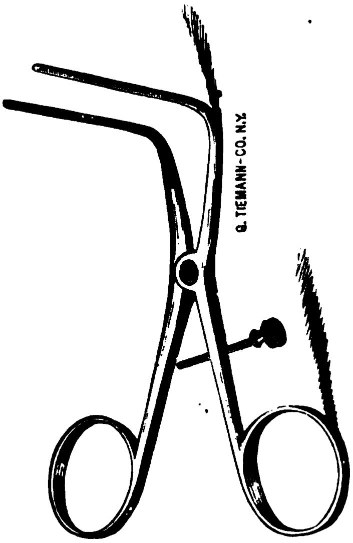


FIG. 237. Frankel's Nasal Speculum.

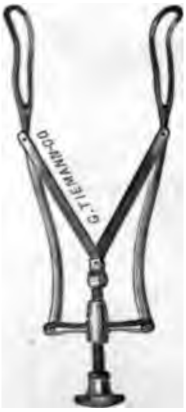


FIG. 238. Folsom's Nasal Speculum.

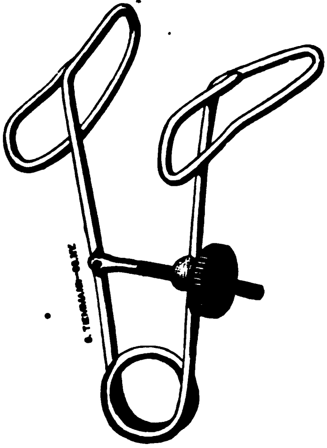
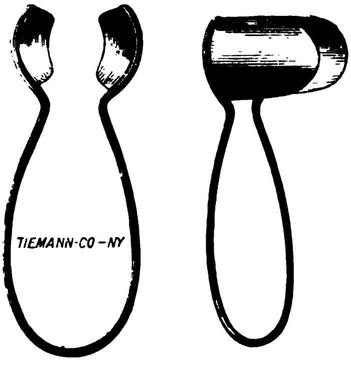


FIG. 239. Thudichum's Nasal Speculum.



NASAL INSTRUMENTS.

FIG. 239*b*. Rubber Tampon for Epistaxis.

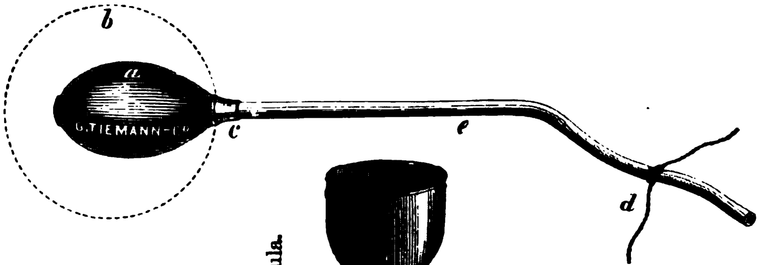


FIG. 239*c*. Caro's Nasal Clamps.

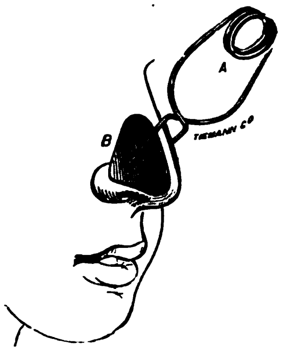


FIG. 239*e*. Zaufal's Trichter Specula.

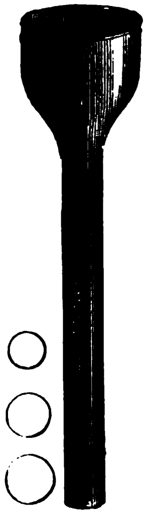


FIG. 239*d*. Clark's Nasal Douche.

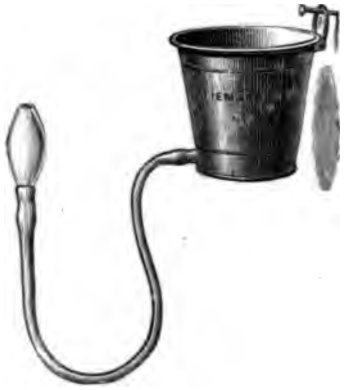


FIG. 239*f*. Hard Rubber Laryngeal and Posterior Nares Syringe.

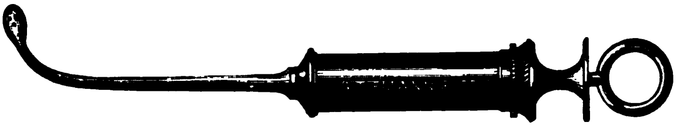
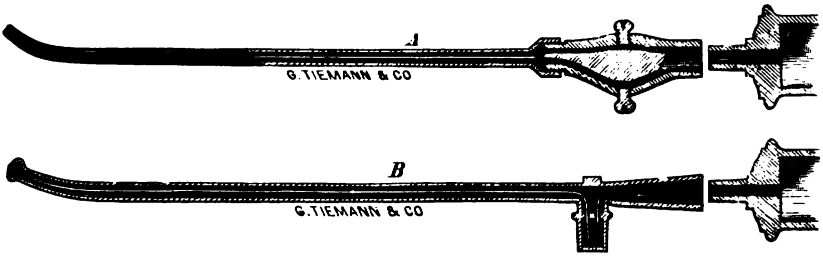


FIG. 239*g*. Bennett's Posterior Nares Syringe.



See also—Figs. 358 and 359. Fullgraf's Posterior Nares Tubes and Douche.
Fig. 364*d*. Warner's Catarrhal Douche.
" 364*e*. Chapman's Nasal Spray.
" 364*g*. Robinson's Powder Blower.
Figs. 13 and 14, Supplement. Bridge's Nasal Douche and Powder Blower.
Fig. 23, Supplement. Sexton's Insufflator.

NASAL INSTRUMENTS.

FIG. 240. Thudichum's Nasal Douche.

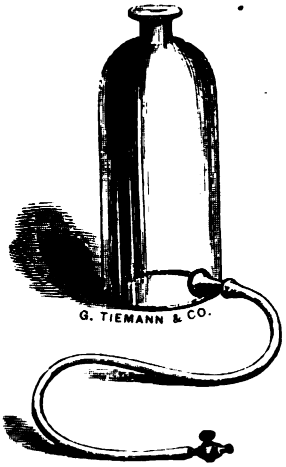

G. TIEMANN & CO.

FIG. 240*b*. Simrock's Nasal Speculum.

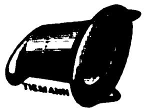


FIG. 240*a*. Bonafont's Nasal Speculum.

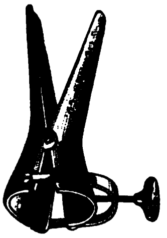


FIG. 241. Nasal Polypus Forceps.

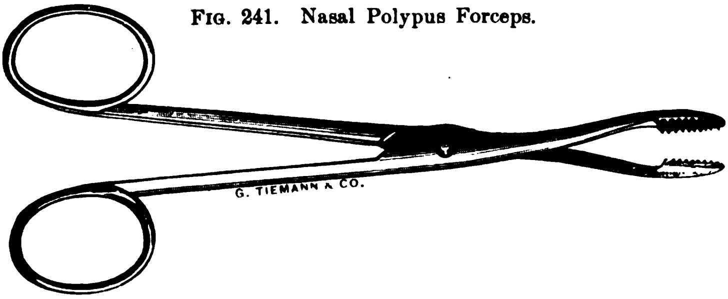

G. TIEMANN & CO.

FIG. 242. Polypus Forceps, Crossing Blades.

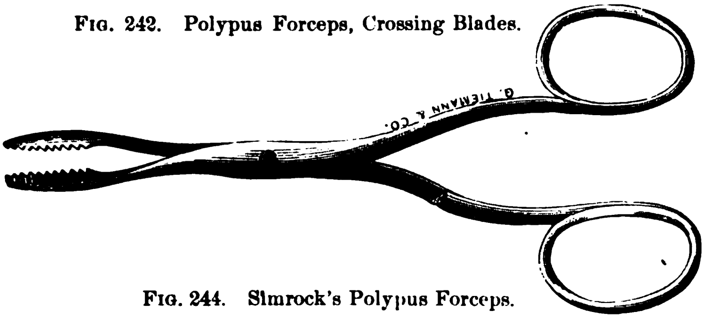

G. TIEMANN & CO.

FIG. 243. Gross' Polypus Forceps.

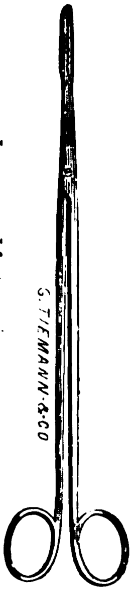


FIG. 244. Simrock's Polypus Forceps.

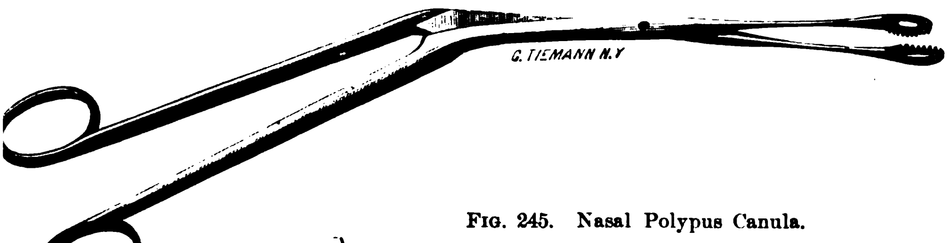
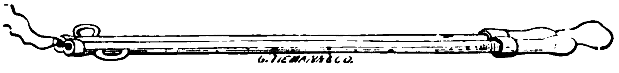


FIG. 245. Nasal Polypus Canula.


G. TIEMANN & CO.

NASAL INSTRUMENTS.

FIG. 246. Belocq's Canula for Epistaxis.

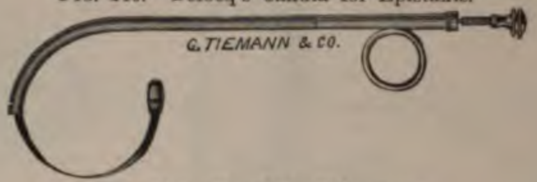


FIG. 247. Simrock's Rhinoscope.

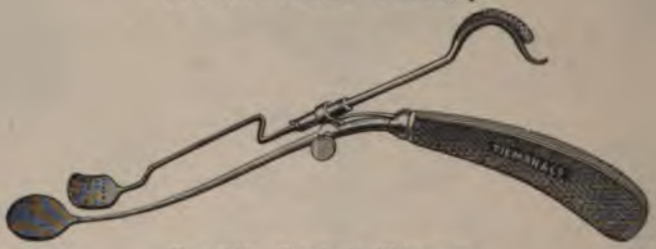


FIG. 248. Duplay's Rhinoscope.

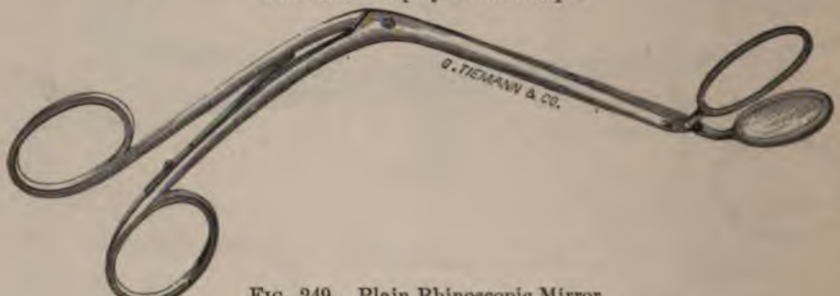


FIG. 249. Plain Rhinoscopic Mirror.

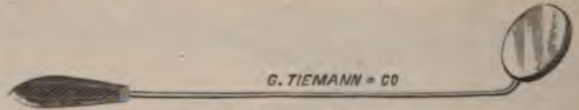
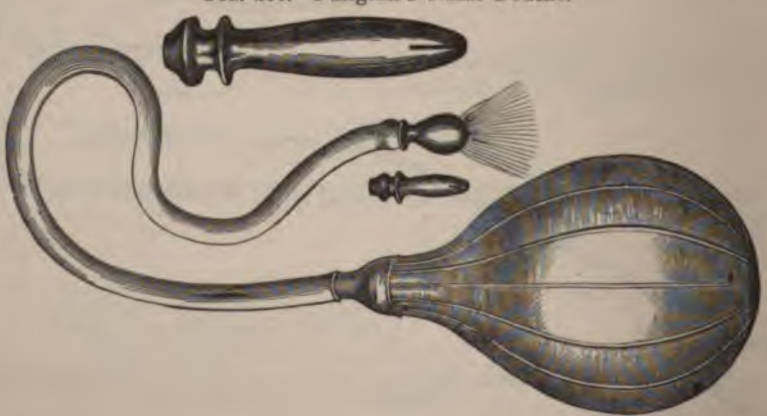


FIG. 250. Füllgraff's Nasal Douche.



HARELIP INSTRUMENTS.

FIG. 251. Buck's Pin Conductor.

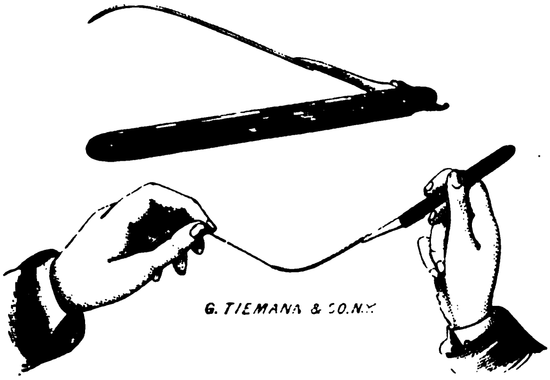

G. TIEMANN & CO.N.Y.

FIG. 252. Hutchison's Harelip Forceps

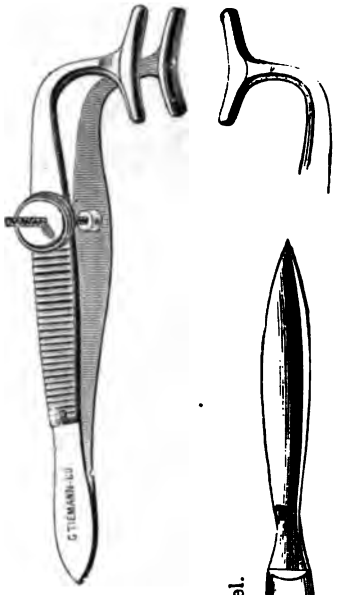
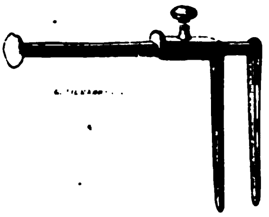


FIG. 253. Prince's Harelip Clamp.



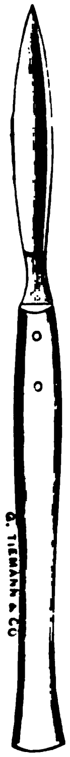


FIG. 255. Scalpel.

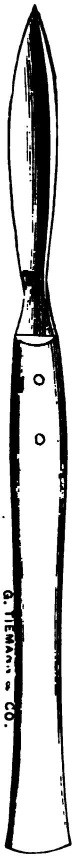

G. TIEMANN & CO.

FIG. 256. Harelip Scissors, Angular.

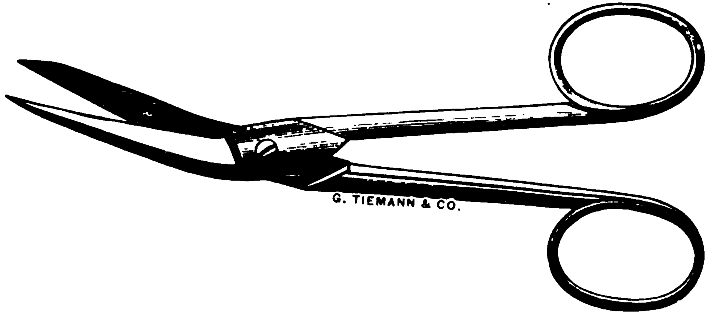

G. TIEMANN & CO.

FIG. 257. Hamilton's Harelip Scissors, Heavy.

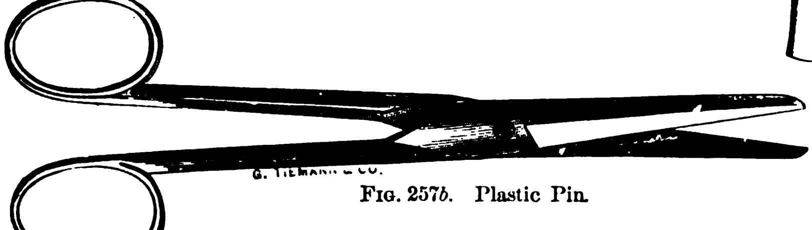

G. TIEMANN & CO.

FIG. 257b. Plastic Pin.

Silver Harelip Pins with Removable Steel Points. Fig. 257c.
Plastic Pins of all Sizes.

FIG. 257c. Harelip Pin, with Removable Point.

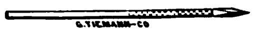


FIG. 257d. Post's Pin Conductor.

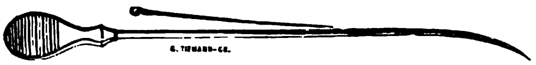


FIG. 258. Smith's Harelip Forceps.

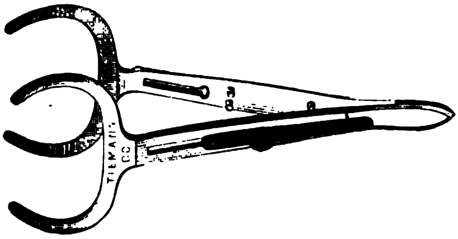
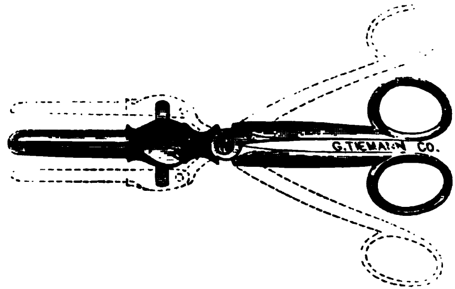


FIG. 258b. Parallel Harelip Forceps.



ORAL, LARYNGEAL AND ŒSOPHAGEAL INSTRUMENTS.

SPECULA ORIS.

FIG. 259b. Goodwillie's Elastic Gag.

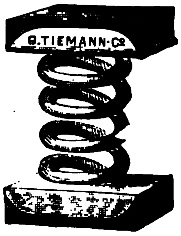


FIG. 259. Mussey's Mouth Gag.

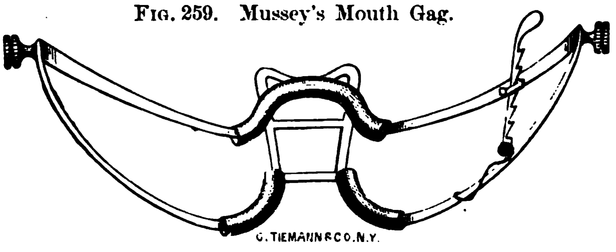


FIG. 259c. Clover's Mouth Gag.

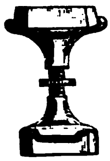


FIG. 260. Gross' Speculum Oris.

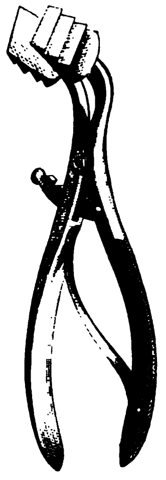


FIG. 261. Whitehead's Mouth Gag (*in situ*).

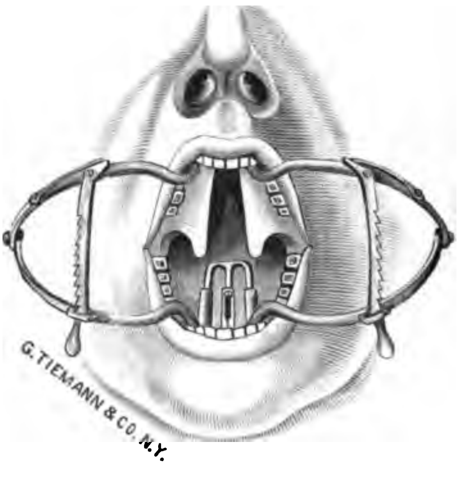
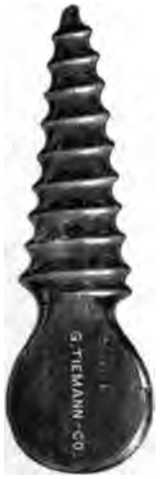


FIG. 260b. Hard Rubber Oral Screw.



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

SPECULA ORIS.

FIG. 261*b*. Whitehead's First Mouth-Gag.

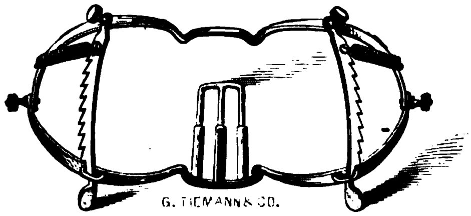

G. TIEMANN & CO.

FIG 262. Mott's Heister's Speculum Oris.

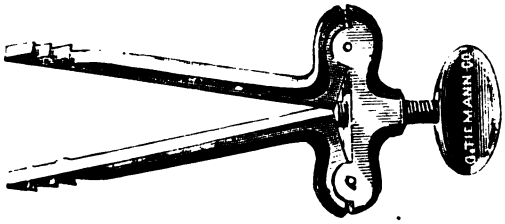

G. TIEMANN & CO.

FIG. 263. Westmoreland's Speculum Oris, for Reducing Lockjaw.

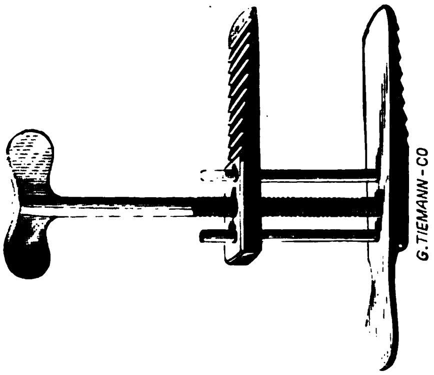


FIG. 264. Goodwillie's Speculum Oris, for Reducing Lockjaw.

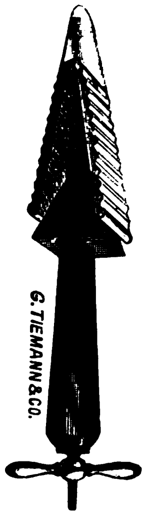

G. TIEMANN & CO.

FIG. 265. Dobell's Tongue-holding Forceps.

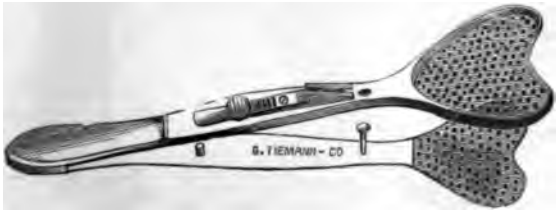
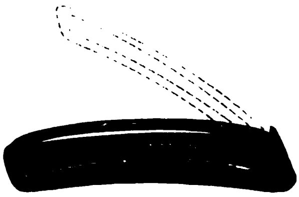


FIG. 265*b*. Pocket Tongue Depressor.



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

TONGUE DEPRESSORS.

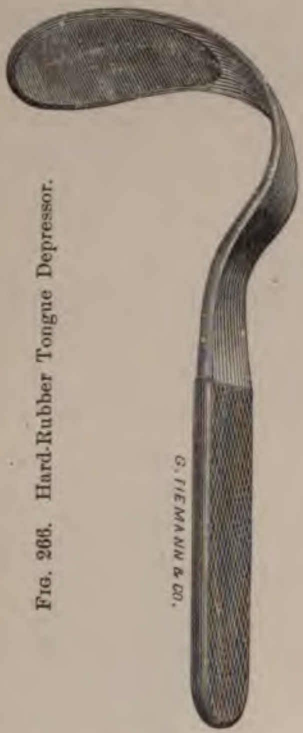


FIG. 266. Hard-Rubber Tongue Depressor.

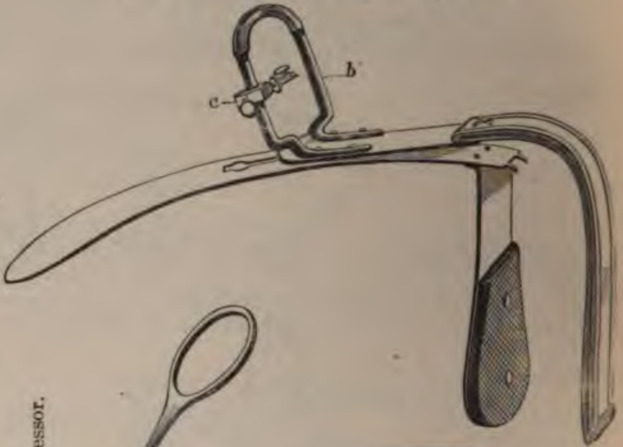


FIG. 267. Elsberg's Tongue Depressor.

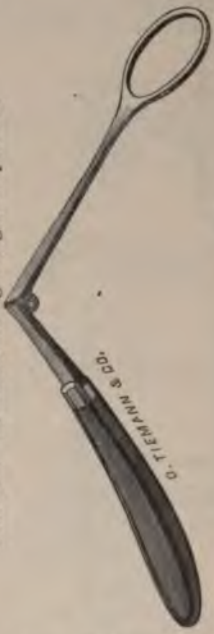


FIG. 268. Green's Folding Tongue Depressor.

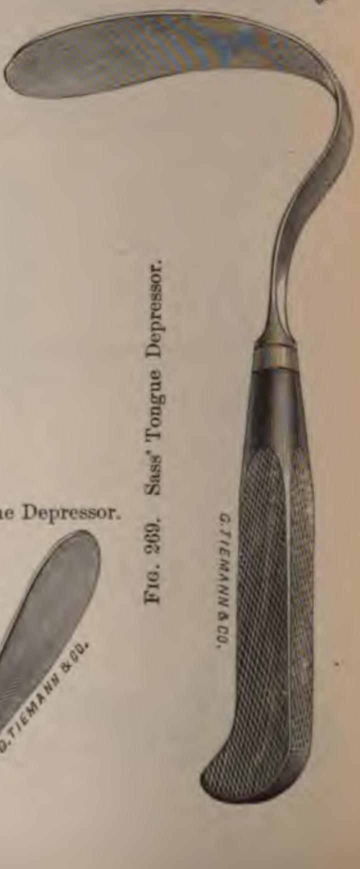


FIG. 269. Sass' Tongue Depressor.

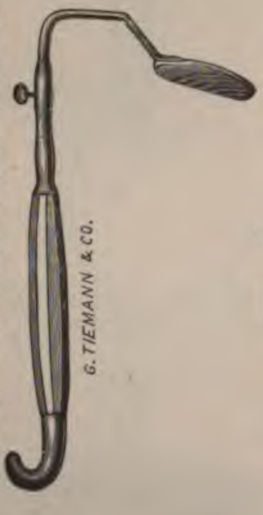


FIG. 270. Türk's Tongue Depressor (3 blades).

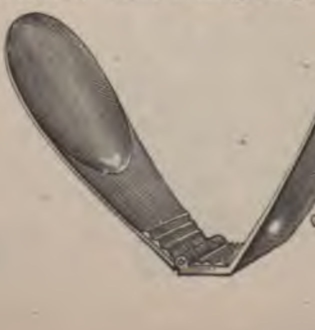


FIG. 271. Steel, Folding Tongue Depressor.

ORAL, LARYNGEAL AND ŒSOPHAGEAL INSTRUMENTS.

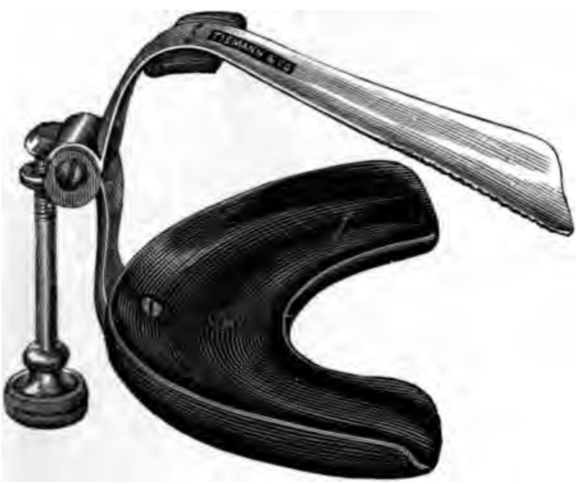


Fig. 272. Church's Tongue Depressor.

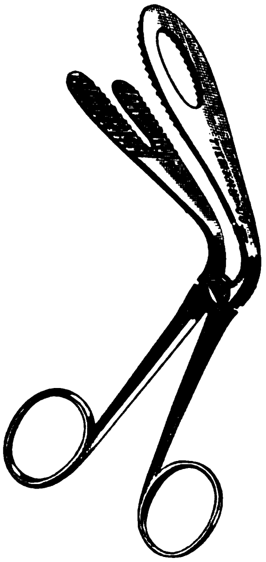


Fig. 272b. Cusco's Tongue-Holding Forceps.

TONSIL AND UVULA INSTRUMENTS

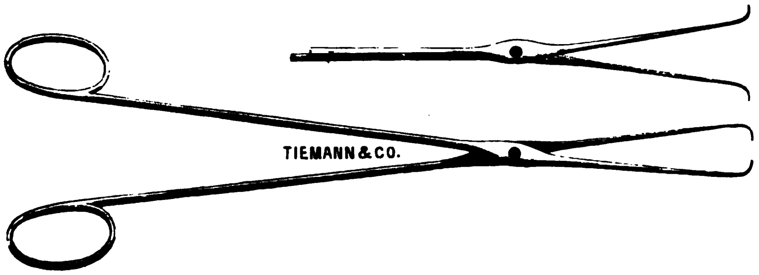


Fig. 273. Tenaculum Forceps, for Seizing. (Vulsellum.)

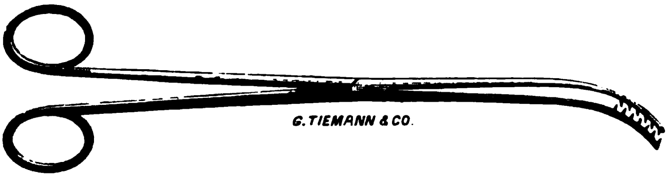

G. TIEMANN & CO.

Fig. 274. Musseux's Forceps, for Seizing. (Vulsellum.)

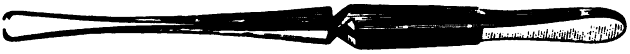


Fig 275. Langenbeck's Seizing Forceps.

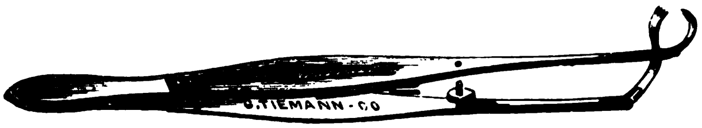


Fig. 276. Durham's Seizing Forceps.

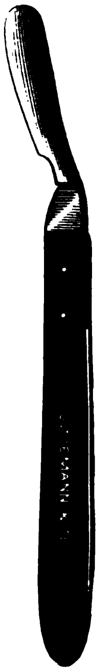


Fig. 273b. Yearsley's Tonsil Knife.

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

TONSIL INSTRUMENTS.

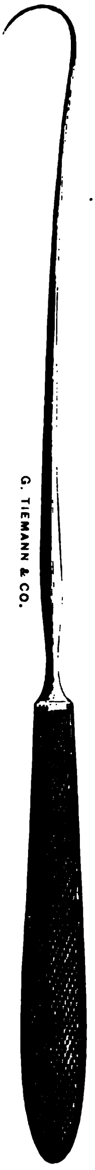


FIG. 277. Tonsil Hook.

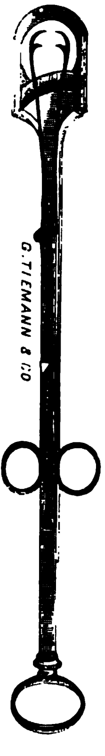


FIG. 278. Billing's (U. S. A.) Tonsilotome.

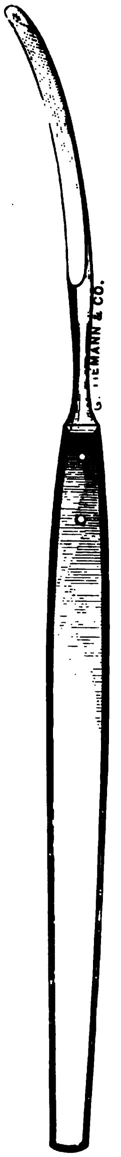


FIG. 279. Green's Tonsil Bistoury.

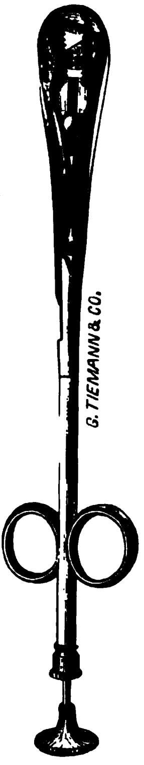


FIG. 280. Tiemann & Co.'s Uvulatome.

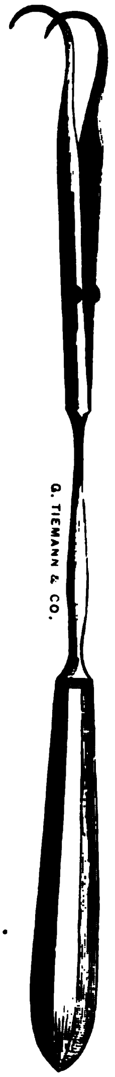


FIG. 281. Green's Double-Hook.

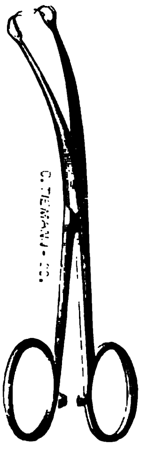


FIG. 282. Vulsellum.

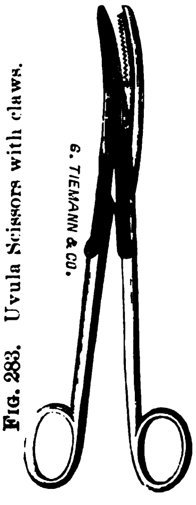


FIG. 283. Uvula Scissors with claws.

ORAL, LARYNGEAL AND ŒSOPHAGEAL INSTRUMENTS.

TONSIL INSTRUMENTS.

FIG. 283*b*. Mackenzie's Tonsilotome.

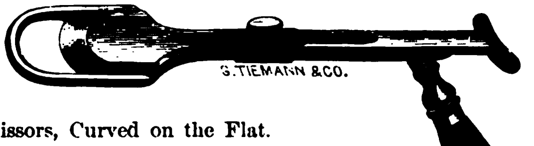


FIG. 284. Tonsil Scissors, Curved on the Flat.

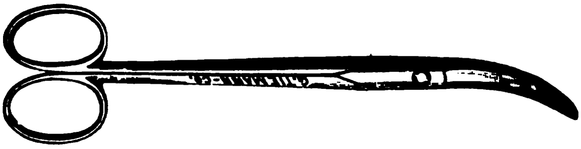


FIG. 285. Hamilton's Tonsilotome.

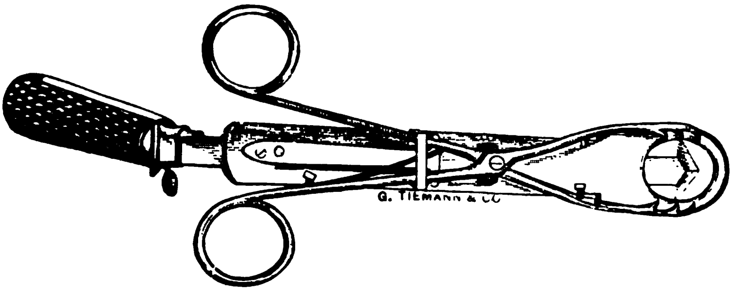


FIG. 286. Tiemann & Co.'s Tonsilotome.

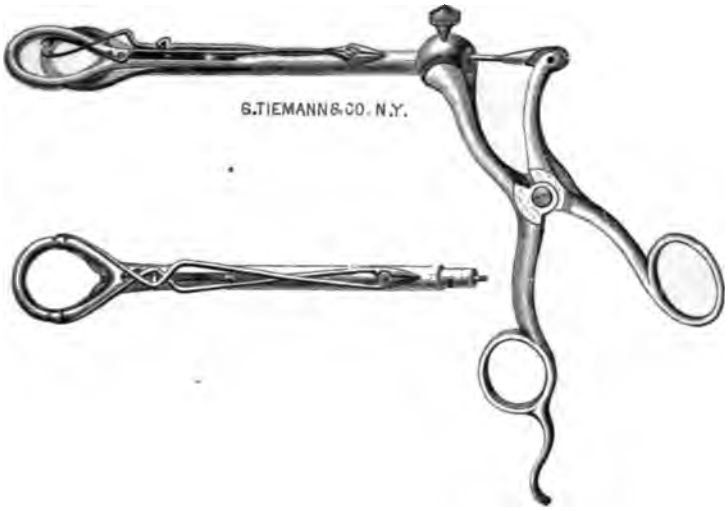


FIG. 287. Fahnestock's Tonsilotome.

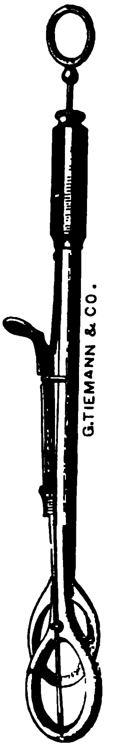
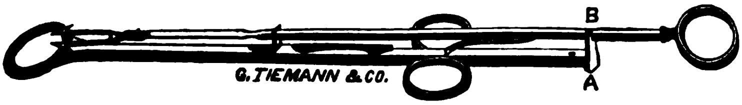


FIG. 288. Mathieu's Tonsilotome.



ORAL, LARYNGEAL AND ŒSOPHAGEAL INSTRUMENTS.

STAPHYLORRHAPHY AND URANISCOPLASTIC INSTRUMENTS.

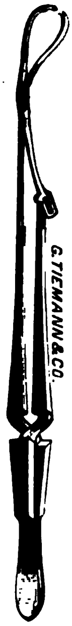


FIG. 289. Whitehead's Seizing Forceps.

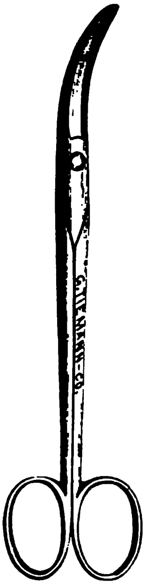


FIG. 290. Curved Scissors for Dividing the Muscles.

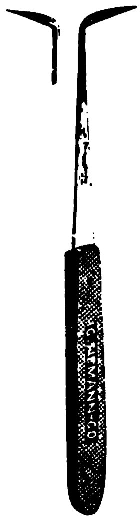


FIG. 291. Whitehead's Knives, for Paring the Edges.

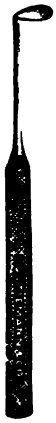


FIG. 292. Whitehead's Hoe, for Dividing Muco-Periosteal Membrane.

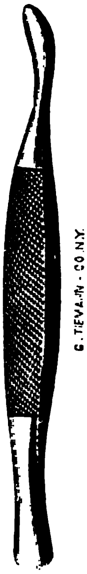


FIG. 293. Sayre's Periosteotome.

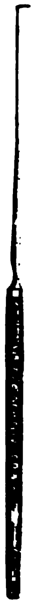


FIG. 294. Tenaculum, for Pulling the Velum aside, Holding the Edges of Flaps, &c.

FIG. 295. Whitehead's Spiral Needle, for Sutures.

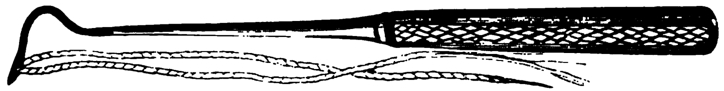
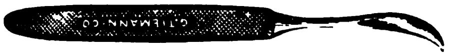


FIG. 296. Whitehead's Gum Knife.



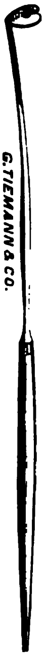


FIG. 297. Sims' Adjuster. (For Wire Sutures.)

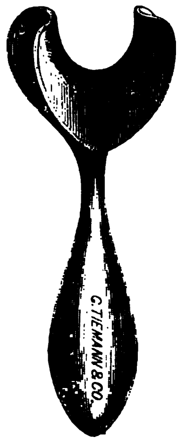
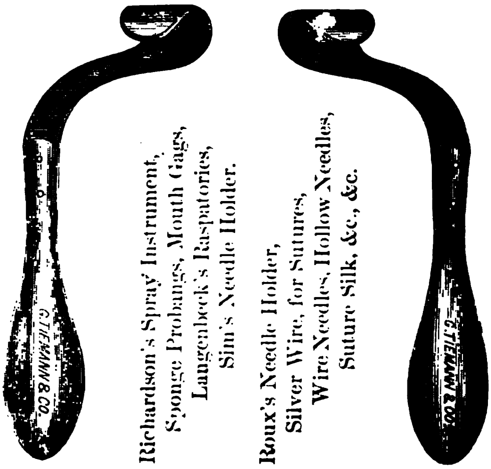


FIG. 298. Luer's Cheek Retractor.

FIG. 298*b*. Right and Left Cheek Retractors.



Richardson's Spray Instrument,
Sponge Probangs, Mouth Gags,
Langenbeck's Raspatories,
Sim's Needle Holder.

Roux's Needle Holder,
Silver Wire, for Sutures,
Wire Needles, Hollow Needles,
Suture Silk, &c., &c.

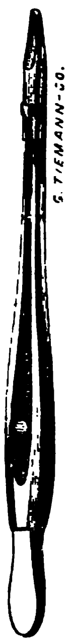
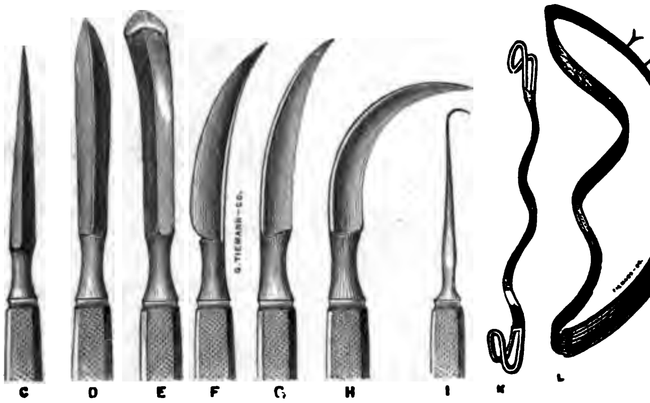


FIG. 297*b*. Sims' Wire-Twisting Forceps.

ORAL, LARYNGEAL AND ŒSOPHAGEAL INSTRUMENTS.

STAPHYLORRHAPHY AND URANISCOPLASTIC INSTRUMENTS.

FIG. 298 *c* to *l*. Langenbeck's Knives, Tenaculum, Retractor and Suture Holder.



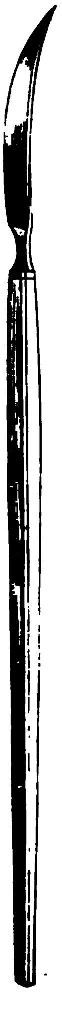


FIG. 299. Staphylorrhaphy Knife, Curved Right or Left.

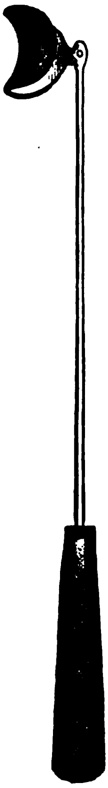


FIG. 301. Cheek Retractor.

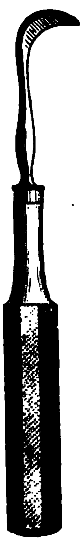


FIG. 302. Goodwillie's Periosteum Levator.

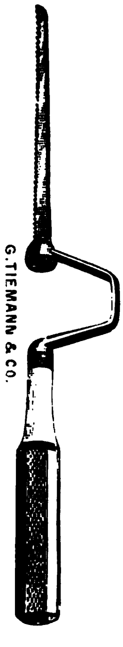


FIG. 303. Goodwillie's Oral Saw.

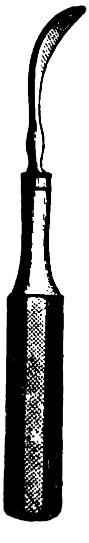


FIG. 304. Goodwillie's Periosteum Levator.

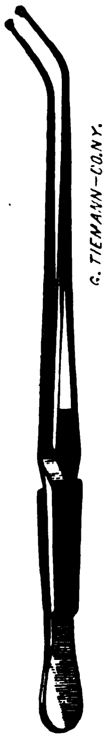


FIG. 305. Seizing Forceps.

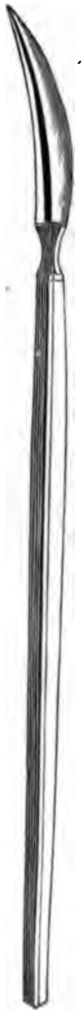


FIG. 300. Double-edged Staphylorrhaphy Knife.

ORAL, LARYNGEAL AND ŒSOPHAGEAL INSTRUMENTS.

LARYNGOSCOPIC INSTRUMENTS.

FIG. 306. Roe's Modification of Tobold's Laryngoscope.

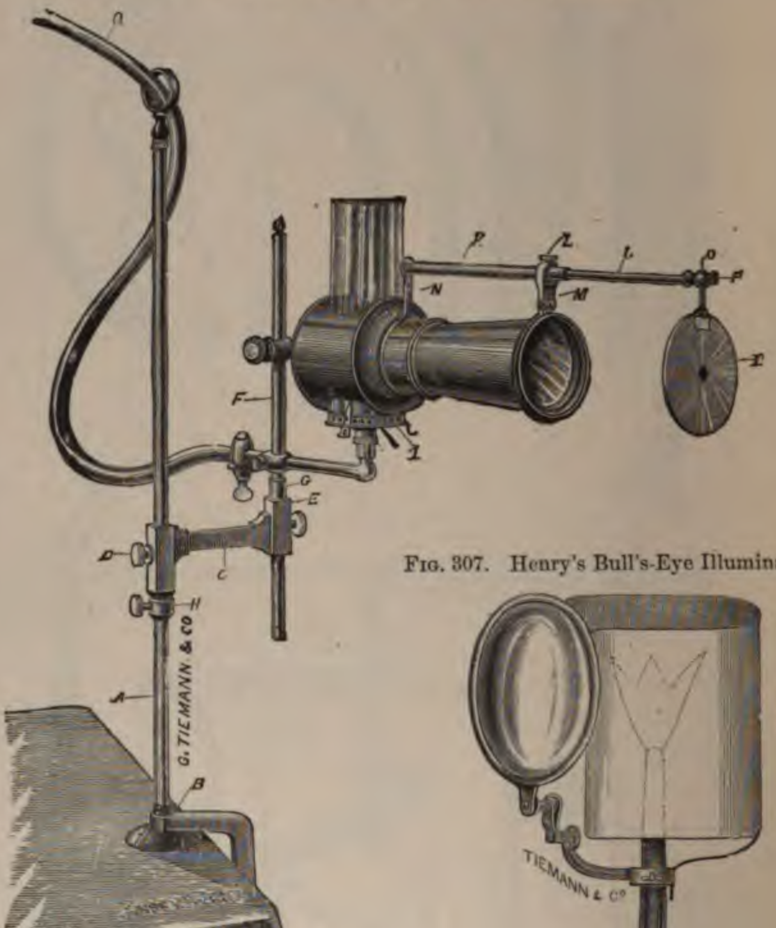


FIG. 307. Henry's Bull's-Eye Illuminator.

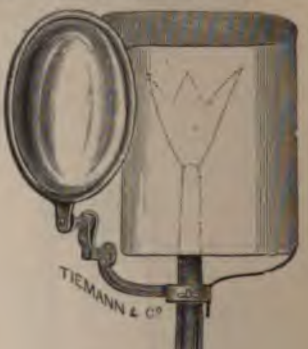
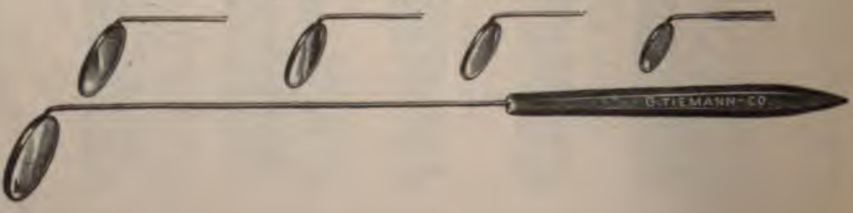


FIG. 308. Laryngoscopic Mirrors.



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 309. Tiemann & Co.'s Laryngoscope, with Head-Band.

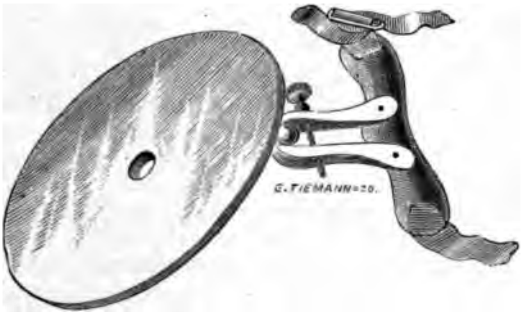
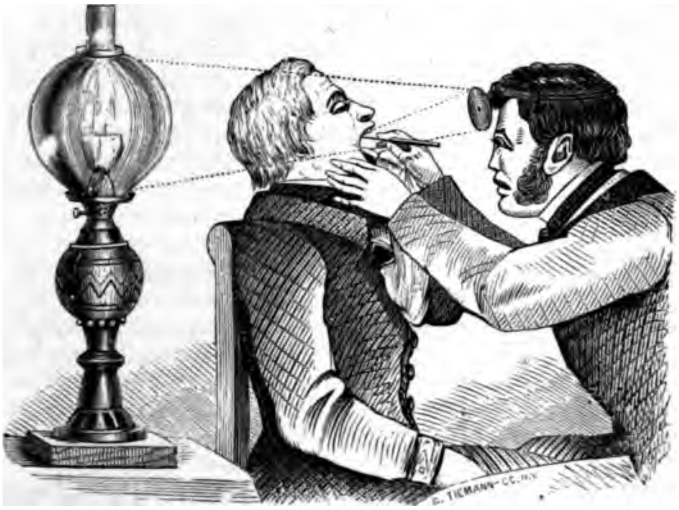


FIG. 310. Application of Tiemann & Co.'s Laryngoscope.



The Laryngeal Instruments represented on the following pages are designed by distinguished Laryngoscopists of Europe and America, and recommend themselves, on account of their great simplicity, for general use.

Before using the *Laryngeal Mirror* (to prevent deposits of moisture), warm it over a spirit lamp, as the immersion in hot water, recommended by some, favors the decomposition of the silver coating of the glass.

Sponge-holders are preferable to Probangs, because the same piece of sponge need not be used twice.

Solid Nitrate of Silver is best applied by means of Lente's or other Probes, the extremity of which is dipped into some Nitrate of Silver fused over a spirit lamp, in either a porcelain or platinum cup. In this way a coating of the nitrate adheres firmly to the probe, and the application is safe.

The pistons of all Syringes used for the application of solutions should be kept in proper order, by frequent oiling, and by renewing the leather packing whenever it becomes too loose.

ON THE USE OF THE LARYNGOSCOPE.

BY DR. E. H. SIEVEKING,

Physician in Ordinary to the Prince of Wales, and to St. Mary's Hospital.

BEFORE speaking of laryngeal pathology as exhibited by the laryngoscope, let me say a few words anent the apparatus to be employed, the method of using it, and the points to be observed.

What do you want to do? In plain English, you want to look round a corner into a dark hole. This sounds paradoxical, but the paradox is solved by the laryngoscope.

The light, either of the sun or of a lamp, is received on a mirror attached to the observer's forehead, from which it is reflected on to a small mirror which is introduced into the fauces of the patient, and from this mirror again the light is thrown down upon and into the larynx. The angle of incidence being equal to the angle of reflection, you have merely to place your mirrors in such a relation to one another, as to secure the proper direction of the rays of light, and a perfect and distinct image of the parts illuminated will be visible on the small mirror.

The sun can not be relied upon at any hour of the day; and patients would not, even if the sun were always shining, present themselves when his rays penetrated a given locality. We therefore find it much more convenient to trust to artificial light altogether, and accordingly have recourse to a gas moderator, or a paraffin oil lamp, which are not amenable to the caprices of the weather.

It is well to darken the room in which you make your examination; but even this is not absolutely necessary if the light is protected by a convex mirror on one side, and concentrated by one or more lenses on the other. Various apparatuses have been devised for the purpose of intensifying the light. The lamp should be placed close to the patient's head, on either side most convenient to the observer, and so that the lamp and the patient's and observer's heads are in the same horizontal plane. The patient, sitting erect, should push his head back so as to straighten the neck, and facilitate the introduction of the small mirror.

Before attempting to do this, the observer should first ascertain that the reflector is properly adjusted. If he finds that the mouth is fully illuminated, he may fairly conclude that he will be able to throw the light upon the fauces. Beginners generally find a little difficulty in adjusting the reflector, but this is speedily surmounted. Whether you place your mirror on your forehead, or whether you prefer to use it fixed to a lamp, is a matter of little moment Try both ways, and adopt the one you like best. The mirror I employ has a central uncovered spot. It is an improvement upon the original mirror employed by the father of laryngoscopy, Professor Czermak. I admit that with Professor Czermak's instrument I had a difficulty in seeing through the central orifice, but with this modification I find it advantageous first to adjust the reflector so that

I am enabled to see the fauces through the opening, with the eye covered with the reflector, and then I am certain to have the proper axis for both eyes. After you have satisfied yourselves that the lamp and the reflector (which is fixed on the head by an elastic band passing over the forehead) are in the right position, tell your patient to open his mouth widely, to protrude the tongue, and to breathe freely. Some patients will permit you to see into their larynx without in any way fixing the tongue, but this is the exception. As a rule, it is necessary that the patient, or the observer, should take hold of the tip of the tongue with a handkerchief or towel, or to use a tongue depressor, to prevent this "unruly organ" from slipping back. Without this precaution, you very often fail in your endeavors to see below the epiglottis. Your next step, after having got your patient in the proper position, is to warm the laryngeal mirror. This is necessary, to prevent the vapor of respiration being precipitated on, and dimming the mirror; but take care not to overheat it. As a precaution, it is well to test the temperature, by applying the back of the mirror to your own cheek.

Take hold of the stem of the mirror as if you were holding a pen; introduce it into the mouth without touching the tongue, teeth, or lips, sinking the hand at first, and then raising it gradually, so as to allow the mirror to form a curve until it reaches the uvula. Almost the whole secret of the manipulation in laryngoscopy consists in this. If you touch the lips or teeth, you tease the patient, but if you touch the tongue, you are certain to excite reflex action, and the root of the tongue will arch up to impede your view. *Audacem fortuna juvat.* Push your mirror, after having passed the janitors, well against the uvula, and you will rarely meet with any serious impediment in getting a proper view of the larynx. An unsteady hand creates difficulties which need not exist, by bringing the mirror into contact with other parts than the uvula and soft palate. These are not very sensitive, but if you tease the root of the tongue, or the arches of the palate, you infallibly excite reflex action, which will necessitate the withdrawal of the instrument. Having placed your mirror at an angle of about 45° with the horizon, it is well to rest the little finger of the right hand against the patient's cheek, by which means you will steady the instrument. You then secure a proper illumination of the laryngeal mirror, and by the necessary manipulation, which practice alone can teach, you successively examine all the parts exposed to view.

In making the examination and recording the facts observed, you must remember that you are looking into a mirror, which represents the parts in a different relation from their real position. The epiglottis, which in nature is turned from the observer, is represented as opening towards him; the base of the tongue, which is in front of the epiglottis, appears in the mirror behind it; and the vocal cords equally occupy in the mirror a reversed position from that which they really possess. As laryngoscopic illustrations represent the appearances as seen in the mirror, it is necessary to remember the true relation, in order to understand the drawing correctly. The lateral relations will cause less difficulty than the antero-posterior relations. What ordinarily appears to be the left or right, in the subject of observation placed before us, still continues so. We readily make the necessary allowances here from the habit engendered by custom; but it is different in regard to objects placed in front of each other, and reflected in a mirror, because for this our daily life offers us fewer precedents. Perhaps the easiest way to realize the position of the parts as seen in the mirror, is to imagine yourselves looking at the epiglottis and vocal cords, through a hole in the cervical portion of the vertebral column. To the beginner I would say, make your first experiment upon a case in which you are informed there is no special difficulty; remember the rules laid down; bear in mind the anatomy of the parts, and the direction in which you wish to carry the light; and, with a light and steady hand, you will scarcely fail, after one or two attempts, to see that which is ordinarily visible by the aid of this instrument.

Now, what are you to look for? The first point that always attracts the attention of the observer, after having got the light and the mirror duly placed, is the epiglottis. It is the Cape of Good Hope of the laryngoscopists, and it is at times a difficult matter, a very difficult matter, to round the Cape. You will find that it varies as much in form as the nose, and its position not unfrequently is so prone as to render a good view of the subjacent parts almost an impossibility. Then, too, in irritable persons it undergoes a variety of contortions and contractions, which give it a character for muscularity greater than anatomists show it to possess. Still, as a rule, it serves merely as a land-mark anatomically and pathologically; anatomically, because its well-known relations tell you in what direction to look for more important organs; pathologically, because the appearance of the mucous membrane covering the epiglottis is often a valuable indication as to the state of the subjacent parts. Examine the epiglottis carefully, the form, the color, the attachments. It should be perfectly smooth, of a pale, yellowish rose hue, and symmetrical. Look at the fossa formed by the front of the epiglottis with the base of the tongue, and note the state of any secretions upon or near the epiglottis. In disease you will see its color varying from the dull white of anæmia to every shade of uniform, or streaky and patchy redness. It may present ulcers of varying size and depth; it may be deformed by old cicatrices or congenital malformation; tumefaction from inflammatory or œdematous thickening of the mucous and submucous layers may present itself; and it may exhibit extravasations of blood, or be more or less bathed in pus, or covered with a mucous secretion. Similar conditions may be discovered in the glotto-epiglottid fossa, or on the glotto-epiglottid folds. In order to see the parts subjacent to the epiglottis, you will have to depress the handle of your mirror somewhat, so as successively to illuminate the posterior surface of the epiglottis; the arytenoid cartilages, with the corpuscula Santorini and Wrisbergii; the superior thyro-arytenoid folds, or the false vocal cords, as they are also called; and by turning the mirror laterally, you will examine the right and left sides of the introitus laryngis, and especially the state of the ventricles of the larynx. These are cul-de-sacs intervening between the vocal cords proper, and the superior thyro-arytenoid folds. The state of the ventricles has an important bearing on the production of the voice, inasmuch as their patulousness is essential to the free vibration of the vocal cords, and the due production of voice. If the mucous membrane of the ventricles is swollen, the pitch and sonorousness of the voice is interfered with, and the more the pouch is obliterated, the greater will be the interference with phonation. It is here that various secretions form and accumulate, and you will readily understand why these should more or less affect the voice, as they present obstacles to the passage of the air, or diminish the vibrations of the aërial pulse. If the secretions are viscid, you may at times be puzzled by strings of mucus extending across the entrance of the larynx, closely simulating the vocal cords themselves. Little patches of secretion may also simulate ulcers. The sponge or brush will readily remove such secretions, and show the condition of the subjacent membrane. The ventricles, moreover, are the frequent seat of morbid growths. All these points having been noted, you seek the vocal cords themselves.

In a healthy larynx the vocal cords stand out, with a clear pearly sheen which is peculiarly characteristic. Once seen, the appearance is not to be forgotten; and you will often, in doubtful cases of laryngeal disease, rejoice at recognizing this striking feature, because it will prove that the most important part involved in phonation (so far as the larynx is concerned) is healthy. The vocal cords, or inferior thyro-arytenoid ligaments, are mainly composed of yellow elastic tissue, but are endowed with the most marvelous capability of minute vibratile adjustment, subject to the controlling power of the will, exercised through the arytenoid, thyro-arytenoid, crico-arytenoid, and other muscles. It has been calculated that no less than one hundred muscles are brought into action in the ordinary modulation of the voice, but the note which is uttered depends upon the exact degree of tension of two ligaments, at the utmost seven lines in length, which is mainly determined by the two sets of muscles mentioned. You will have a measure of the minuteness of this adjustment when you reflect, that a practised singer is capable of uttering three hundred different notes at will. for each of which, on this minute vibrating cord, a different stop must be applied.

The vocal cords are covered with mucous membrane, distinguished from the mucous membrane of the rest of the larynx, which is ciliated, by being squamous. The mucous membrane overlies the elastic tissue of the cords, and is liable—though to a much less extent than the mucous membrane in the vicinity—to congestion, and the various morbid changes which are seen in this tissue elsewhere. An accurate knowledge of the anatomy and physiology of the parts will enable you more fully to appreciate the importance of minute shades of difference in the appearance of the parts. A roughness of the surface or a discoloration, which would lead to no palpable results elsewhere, here affects the comfort, the occupation, the life of the patient, and is therefore well deserving the study of the practitioner by any additional physical means that may be placed at our disposal. Here, too, we have a good illustration of the difference between vital morbid conditions, and the condition of the same parts as seen after death; a difference that you should always bear in mind, as you may otherwise easily be misled into a wrong interpretation of the phenomena presented on the post-mortem table. If you had merely seen the interior of a larynx, removed from the body, you would scarcely anticipate the marked contrast that exists in life between the vocal cords and the adjacent parts, nor would it be possible satisfactorily to determine the mode in which the variations of sound are produced by the vocal cords. You will find that there was much uncertainty as to the theory to be adopted regarding vocalization, even in Müller's time; and it was not until after the practical introduction of the laryngoscope by Czermak, that the study became satisfactory and the conclusions definite. If I name Czermak, it is not because I do not appreciate the labors of others in this field; but whatever others have done, he certainly has compelled us all, by the demonstration of the comparative facility of laryngoscopic examination, to make it a part of our medical studies.

It would be an injustice, in speaking of the subject, not to mention the name of M. Garcia, a well-known singer and amateur physiologist, who established by laryngoscopic examination much that is now known as to the physiology of the larynx before Czermak had made known his method; but the pearl that M. Garcia discovered was not appreciated by our profession, and therefore, so far as the medical world are concerned, laryngoscope remained an unknown quantity until the appearance of Czermak's monograph.

It is not my object, for the present, to do more than to interest you in the practical employment of the laryngoscope in the recognition and treatment of disease; therefore I do not attempt to lay before you an account of laryngeal physiology—a branch of science which is capable of further development, and which some of you may feel called upon to promote. Allow me yet to revert to a few points connected with the pathology of the larynx, to which I would draw your attention, as illustrating the value of this mode of investigating disease. The practical examination of the numerous cases that present themselves in our hospital, will serve to impress upon your memory and comprehension more vividly what I now merely show you *veluti in speculo.*

I have spoken of various morbid changes seen in or near the vocal cords, showing increased or diminished vascularity, congestive or œdematous swelling, ulceration, cicatrices, growths, all of which I have myself seen. If you consider the muscular and the nervous functions of the parts, you will expect to see these also materially affected by disease. The *plus*—evidenced by spasm—is not likely to be very visible, because it will not leave you time for any thing but immediate action to relieve your patient; but the *minus* of paralytic conditions is frequently observable in the irregular action, or want of action, of one or both vocal cords. It is here that stimulation, and notably the direct application of galvanism, is often of palpable benefit. And you will not examine many larynges before you will satisfy yourselves of the perfect facility with which you may direct the galvanic current, as well as any other medicinal application, to any given part of the larynx.

I have not, however, quite done yet. You may see further than the vocal cords. Their under surface can at present only be examined when there is a hole in the trachea, and at least one instructive instance is on record where this mode of exploration was practiced with much benefit to the patient. But these are refinements of practice upon which it is unnecessary to dwell. I now merely speak of the ordinary employment of the laryngoscope, and I wish to remind you, that having explored the entrance to the larynx and the vocal cords, you should examine, as far as may be, the trachea. It is generally easy to recognize several rings of this tube, and you may, when the larynx is capacious and the patient steady, penetrate to the very bifurcation of the trachea. The only morbid conditions that I have definitely recognized in the trachea, have been scattered ulcers; but it is manifest that, especially in those cases in which foreign bodies have slipped through the glottis, the discovery of their exact site by the laryngoscope may, as it already has been, prove of great practical value to the surgeon.

There is no better mode of initiating yourself into the practice of laryngoscopy than to examine your own larynges, or those of your fellow-students. By this kind of exercitation, you will familiarize yourself with the use of the instrument, no less than with the healthy condition of the parts. M. Garcia's interesting observations were entirely the result of examination made upon his own vocal cords, and as there is room for a further cultivation of this field of physiology, each of you may be enabled to advance science in this direction. But apart from this, the mere dexterity of manipulation will be increased by the practice recommended, and if you know from experience in your own persons how to behave, you will more readily advise your patients what to do, and sympathize with their difficulties. Not every one, however, is a suitable subject for autolaryngoscopy; the narrowness of the introitus laryngis and the prone condition of the epiglottis, no less than an unusual irritability of the parts, frequently render the process extremely difficult. Various methods have been suggested for the removal of undue irritability, such as the inhalation of small quantities of chloroform, the application of bromide of potassium, or the use of astringent gargles. Every now and then, even after you have acquired sufficient dexterity in the use of the instrument, you will meet with cases which present insuperable difficulties. You are then no worse off than your predecessors were without the laryngoscope. You will have to fall back upon those other symptoms which your knowledge of physiology and pathology will teach you to appreciate, and which this instrument is not intended to supersede.—*Lancet, April* 8, 1865, *p.* 360.

SETS OF LARYNGOSCOPIC INSTRUMENTS IN CASES.

LARYNGOSCOPIC SET No. 1.

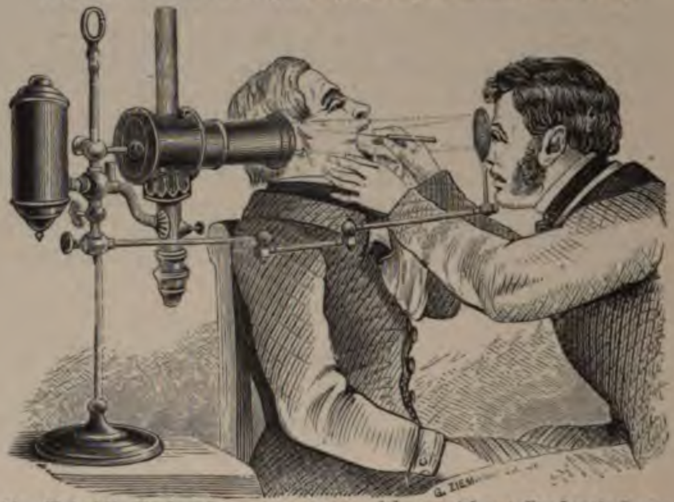
1 Reflector, 11-inch focal distance, 3-inch diameter, with Tiemann & Co.'s Head-band,
2 Laryngeal Mirrors,
1 Lente's Caustic Probe,
1 Morocco Case, lined with Velvet, ... $14 00

LARYNGOSCOPIC SET No. 2.

1 Tongue Depressor, steel handle, japanned,
1 Reflector, 11-inch focal distance, 3½-inch diameter, with Tiemann & Co.'s Head-band, ball and socket movement,
3 Laryngeal Mirrors, assorted sizes,
1 Sponge-Holder, delicate,
1 Lente's Silver Caustic Probe,
1 Morocco Case, lined with Velvet, ... $20 00

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 311. Tobold's Large Laryngoscope and Student's Lamp.



Also Tobold's Pocket Laryngoscopes, with or without Student's Lamp.

FIG. 312 Seeger's Modification of Tobold's Laryngoscope for Gas-light.

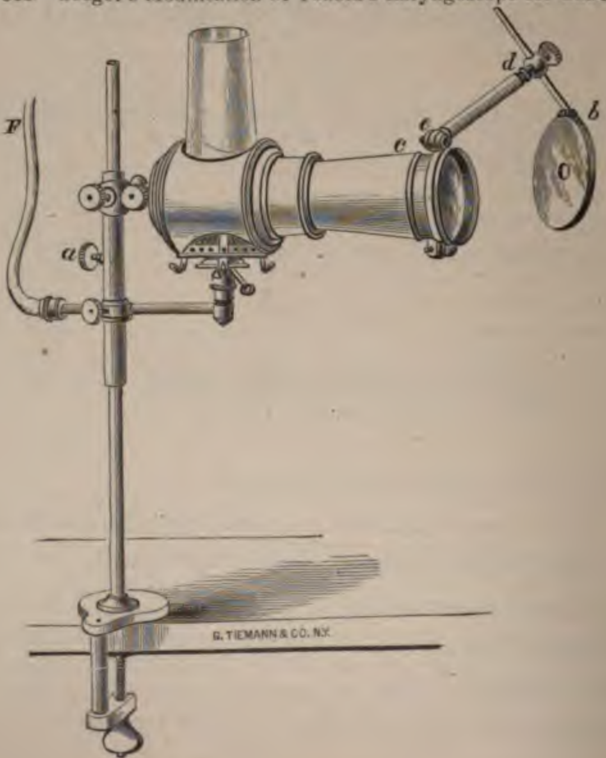
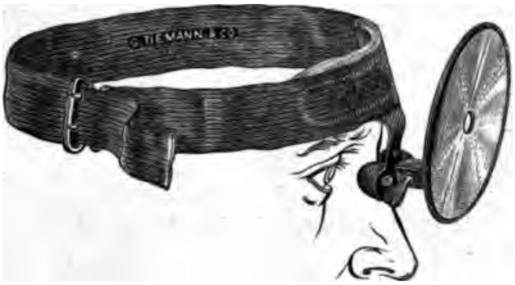


FIG. 312*b*. Schrœtter's Laryngoscope, with Nasal Rest.


G. TIEMANN & CO.

LARYNGOSCOPIC SET No. 3.

3 Laryngeal Mirrors, assorted sizes,
1 Reflector (frontal mirror), 11-inch focal distance, 3½-inch diameter, with Tiemann & Co.'s Head-band, ball and socket movement,
1 Church's Tongue Depressor, self-holding,
1 Uvula Hook, hard rubber,
1 Lente's Silver Caustic Probe,
1 Sponge-Holder, delicate,
1 Morocco Case, lined with Velvet, ... $25 00

LARYNGOSCOPIC SET No. 4.

1 Reflector (frontal mirror), 11-inch focal distance, with Tiemann & Co.'s Head-band, ball and socket movement,
1 Church's Tongue Depressor, self-holding,
3 Laryngeal Mirrors, assorted sizes,
1 Pair Simrock's Throat Forceps, for holding sponge, camel's-hair brushes, or for extracting foreign bodies or polypii,
1 Uvula Hook, hard rubber,
1 Lente's Silver Caustic Probe,
1 Morocco Case, lined with Velvet, ... $28 00

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 313. Mackenzie's Light Concentrator.

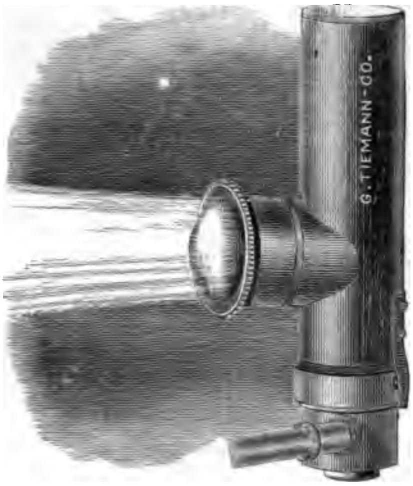
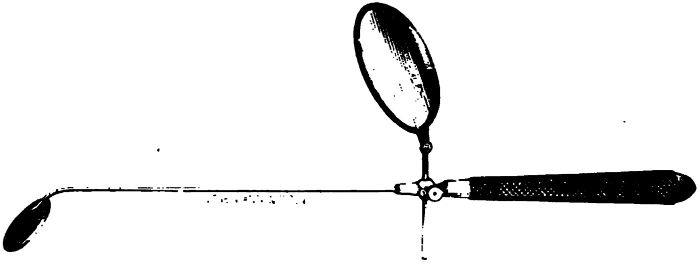


FIG. 314. Elsberg's Pocket Laryngoscope.

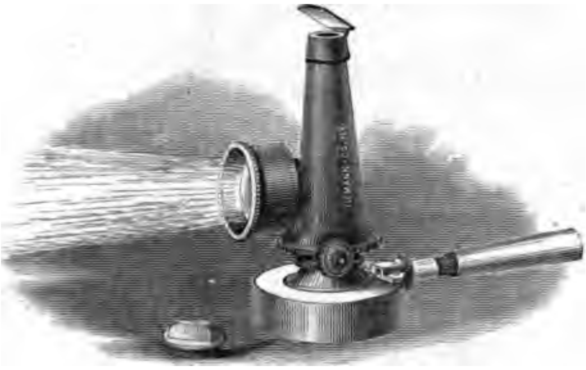


TO ORDER.

STUDENTS' LAMPS,
DIRECT LIGHT CONDENSERS,
RECIPRO-LARYNGOSCOPES,
SMITH'S MIRROR-HOLDERS,
SEMELEDER'S SPECTACLE-FRAME LARYNGOSCOPES,
WALDAU'S REFLECTORS,
CUTTER'S AUTO-LARYNGOSCOPE,
ETC., ETC., ETC.

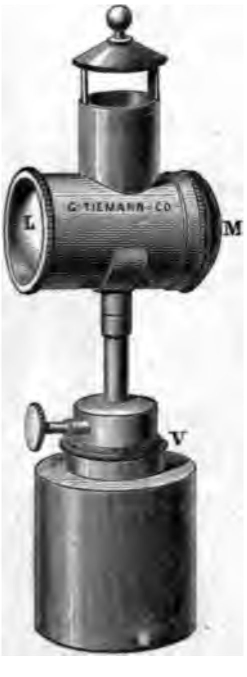
ORAL, LARYNGEAL AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 315. Pocket Illuminator.



The instrument is mainly constructed of brass, and is provided with a lamp for kerosene or oil, the wick admitting of an easy adjustment by means of a side-screw. The handle can be folded against the chimney, so that the instrument can be packed in a small compass. The light passes through a convex lens, and can, by means of a sliding cap, be focused at varying distances, from two to five inches. It may prove useful in operations upon the ear, vagina, rectum, and throat, and may be of great service in operations at night, where a strong and reliable light may not always be obtainable.

FIG. 315*b*. Collins' Lamp.



For the illumination of cavities, such as: the eyes, ears, nares, mouth, pharynx, larynx, &c., to aid in speculum examinations.

The apparatus consists of a reservoir, V, filled with sponge; with this a cotton wick comes in contact and runs up to the light chamber; this is closed by a concave reflector, *M*, and a lens, *L*, to project the rays of light parallel.

To charge the lamp, the lower part is removed and a quantity of mineral oil poured in—just enough to saturate the sponge; it is then turned upside down to expulse any liquid that may have settled on the bottom.

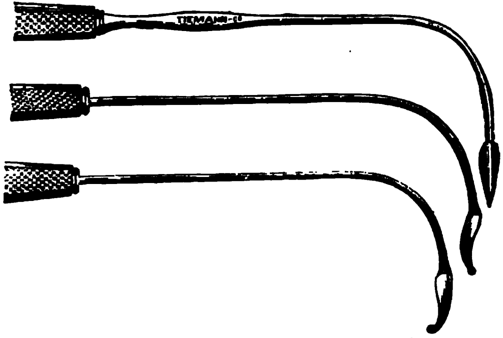
To light the lamp, remove the lens, *L*, with its mounting, and apply a match to the wick; the lens being replaced, the flame may then be regulated by the screw.

To extinguish the light, it suffices to blow into the little chimney of the apparatus.

To clean the reflector (after removing the lens), you rub it with a piece of clean linen or chamois-skin.

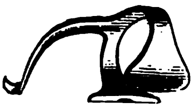
The heat of the hand communicated to the reservoir, sometimes disengages an excess of hydrocarbonic vapor and makes the flame flicker; this is overcome by lowering the wick.

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.



FIGS. 316, 317, 318. Tobold's Laryngeal Knives.

FIG. 319. Grant's Œdema Glottis Instrument.



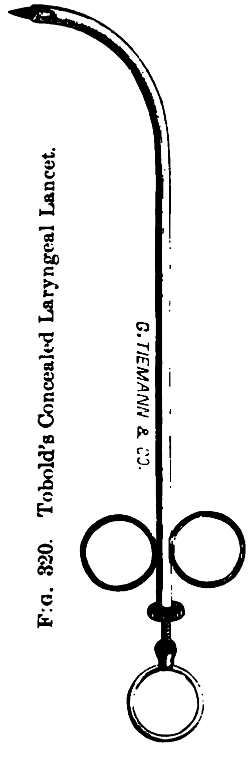


FIG. 320. Tobold's Concealed Laryngeal Lancet.

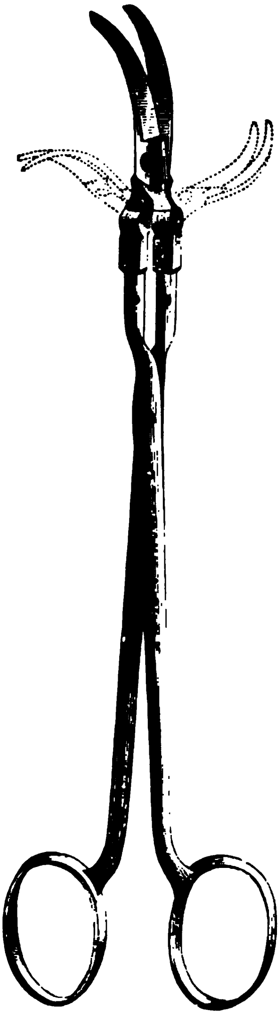


FIG. 321. Haywood Smith's Scissors, Movable Points.

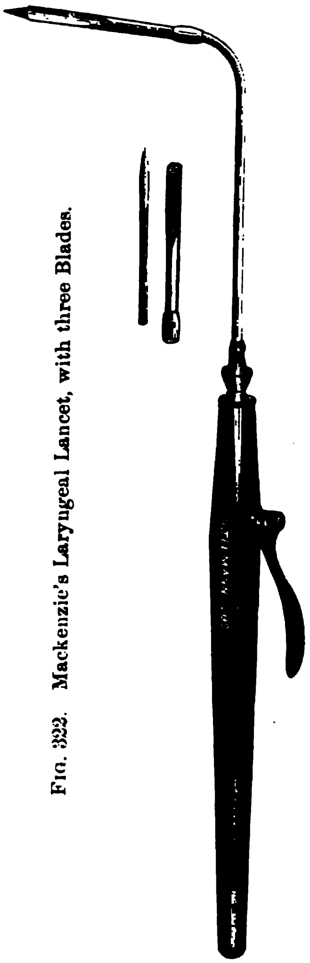


FIG. 322. Mackenzie's Laryngeal Lancet, with three Blades.

ORAL, LARYNGEAL AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 822*b*. Mackenzie's Laryngeal Lancet, two blades.

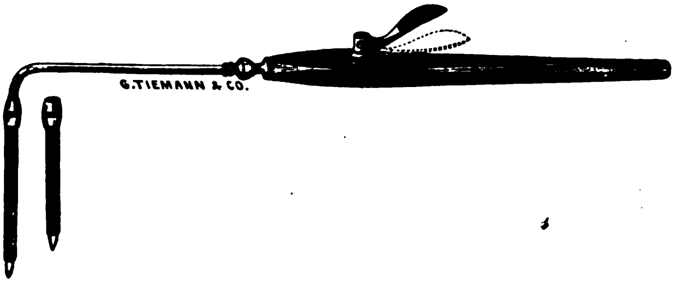


FIG. 823. Mackenzie's Laryngeal Forceps, Scissors and Ecraseur

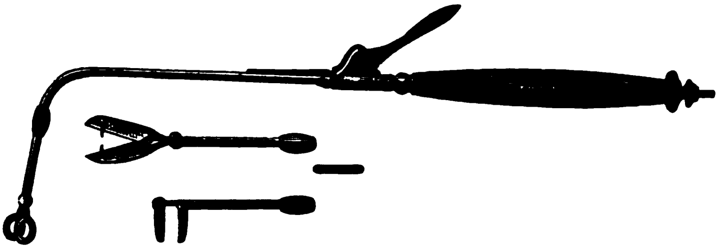


FIG. 824. Tiemann & Co.'s Scissors, movable points.

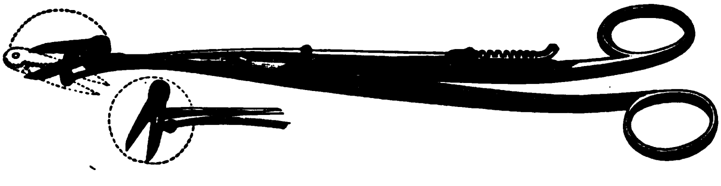
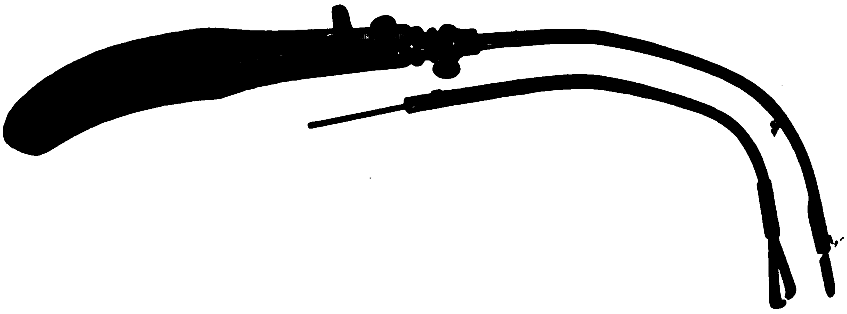


FIG. 825. Schrœter's Laryngeal Lancet and Forceps.



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 326. Buck's Throat Lancet.

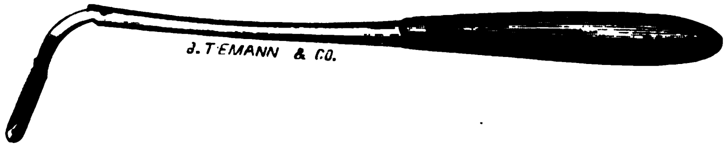


FIG. 327. Buck's Throat Forceps.

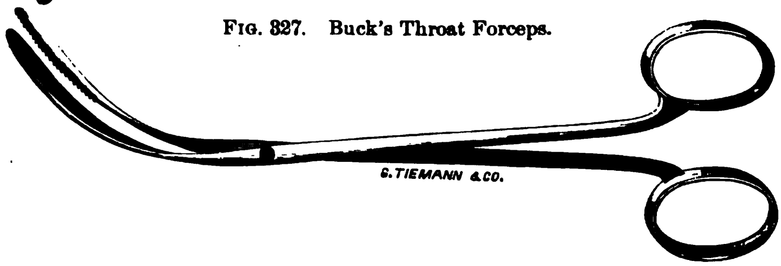


FIG. 328. Cusco's Throat Forceps.

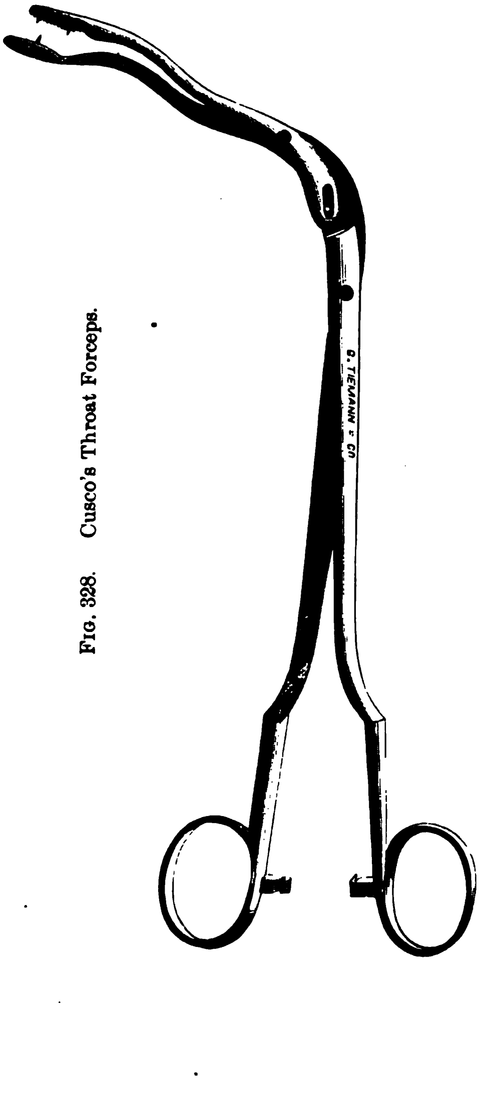


FIG. 329. Simrock's Laryngeal Forceps.

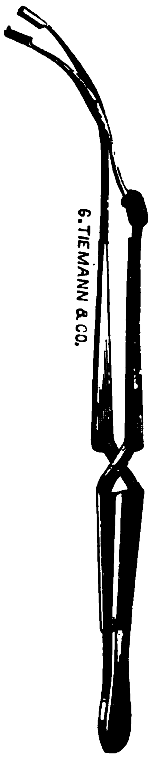
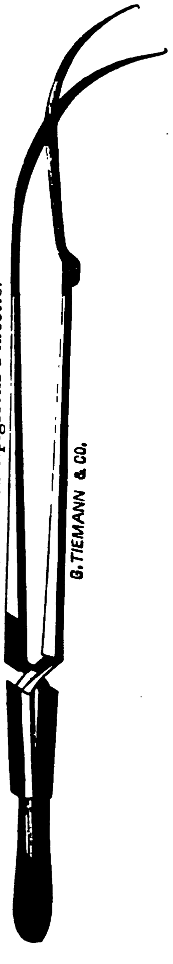


FIG. 330. Brun's Epiglottis Pincette.



ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 331. Burge's Throat Forceps.

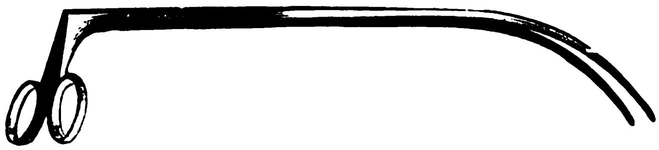


FIG. 332. Fauvel's Laryngeal Polypus Forceps.

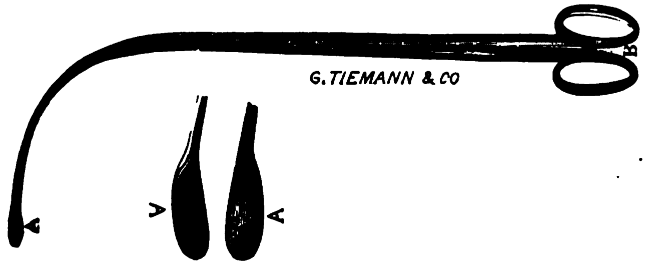


FIG. 333. Mathieu's Throat Forceps.

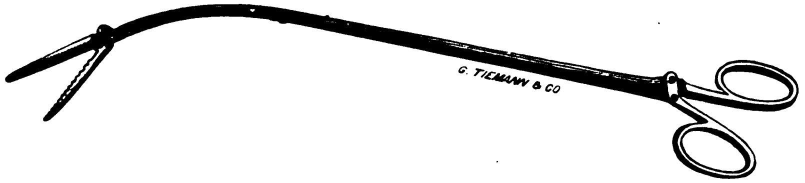


FIG. 334. Schaffer's Throat (and Uterine) Scoop.

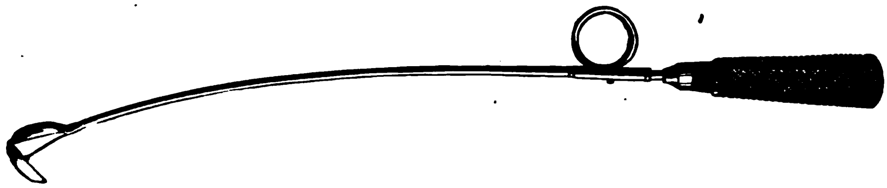


FIG. 335. Tiemann & Co.'s Laryngeal Scoop.

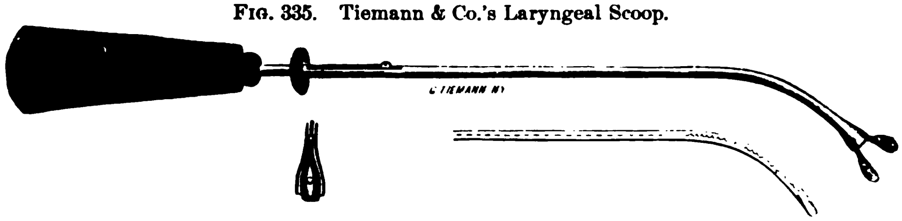
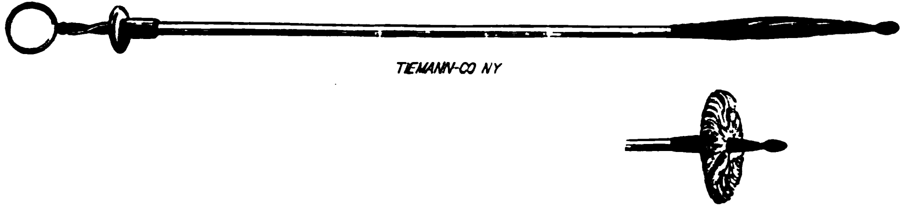


FIG. 336. Bristle Probang, for Removing Foreign Bodies.



ORAL, LARYNGEAL AND ŒSOPHAGEAL INSTRUMENTS.

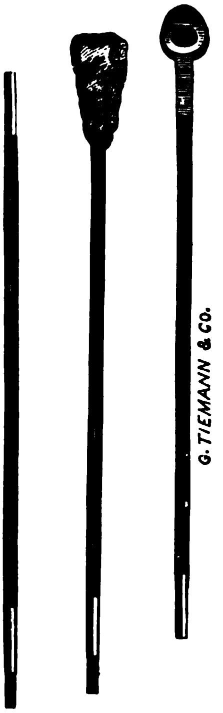


Fig. 337. Probang, with Silver Bucket, in three parts.

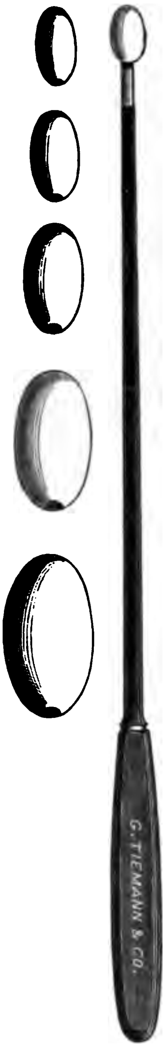


Fig. 337b. Dilators for Œsophageal Stricture.

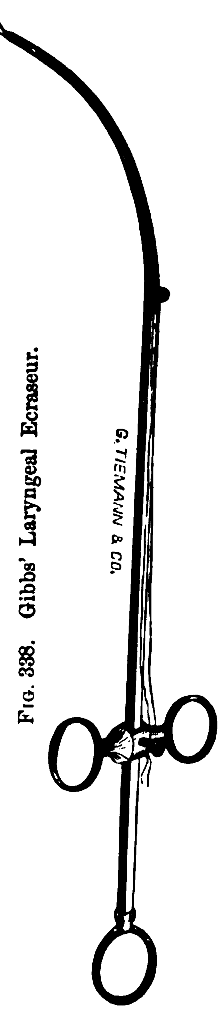


Fig. 338. Gibbs' Laryngeal Ecraseur.

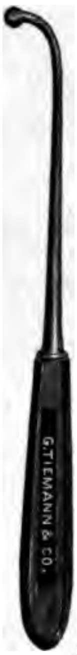


Fig. 338b. Roe's Uvula Hook.

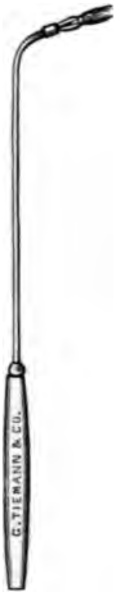


Fig. 339. California Brush-Holder.

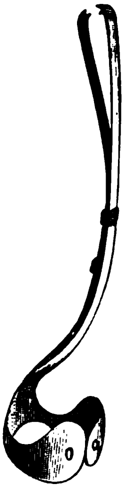


Fig. 340. Finger Sponge-Holder.

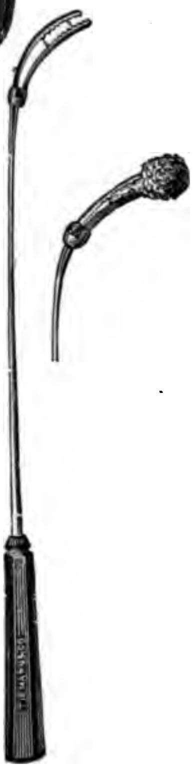
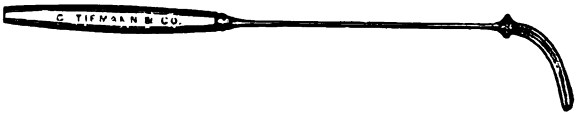


Fig. 341. Granger's Sponge-Holder.

Other patterns of Œsophageal Dilators of Rubber, Hard Rubber and Ivory, &c., always on hand.

Fig. 342. Buck's Sponge-Holder.



ORAL, LARYNGEAL AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 345. Laryngeal Caustic Carrier, concealed.

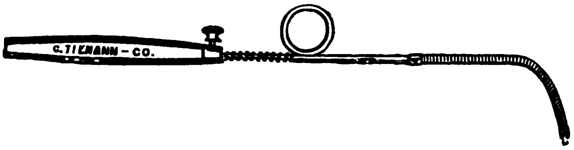


FIG. 343. Child's Brush and Caustic Holder.

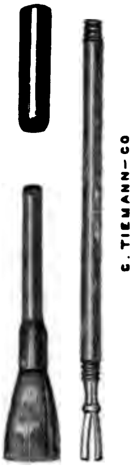
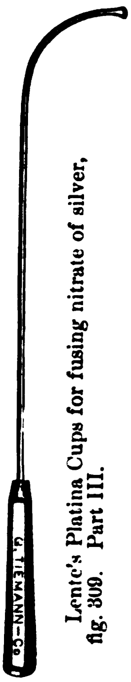


FIG. 346. Lente's Probe (for Caustic).



Lente's Platina Cups for fusing nitrate of silver, fig. 309. Part III.

FIG. 347. Seeger's Brush Holder.

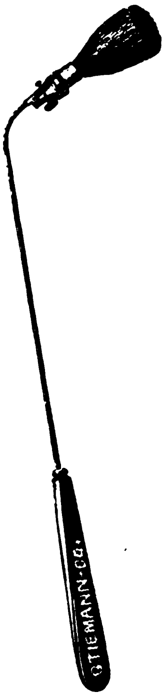


FIG. 347*b*. Ruppaner's Brush Holder.

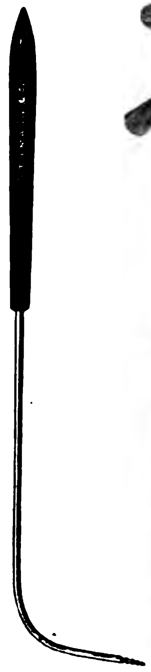


FIG. 349. Wagner's Brush Holder, 2 stems, 12 brushes.

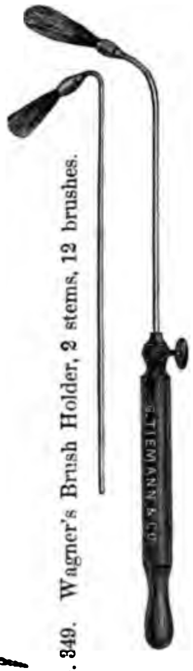


FIG. 344. Brush Holder, Flexible Stem, with twelve Brushes.

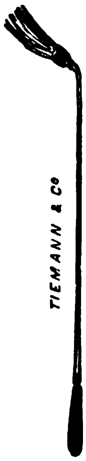


FIG. 349*b*. Noyes' Laryngeal Brush Holder.

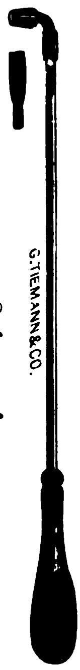
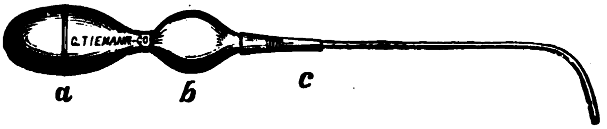


FIG. 348. Elsberg's Insufflator, or Powder Blower.



See page 69. Remarks for using Caustic Probes and Syringes.

ORAL, LARYNGEAL AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 350. Laryngeal Powder-Blower, Hard Rubber.

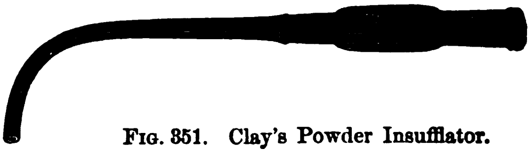


FIG. 351. Clay's Powder Insufflator.

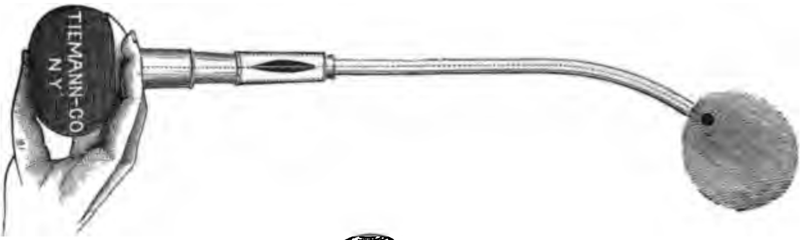


FIG. 352. Leffert's Powder Blower.

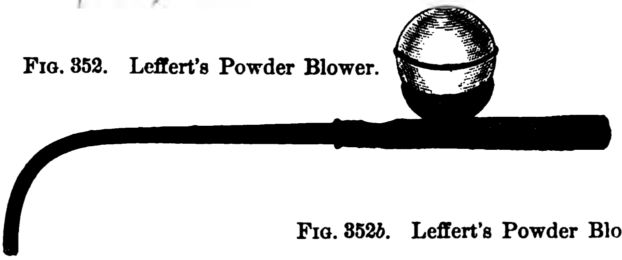


FIG. 352*b*. Leffert's Powder Blower, with mouth piece.

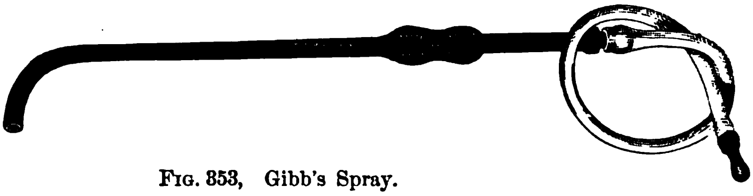


FIG. 353, Gibb's Spray.

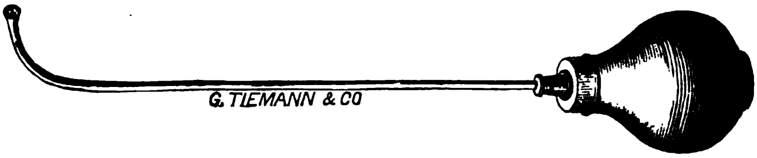


FIG. 354. Stœrk's Drop Tube.

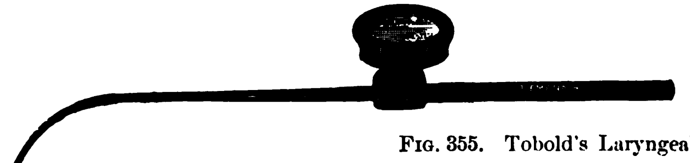
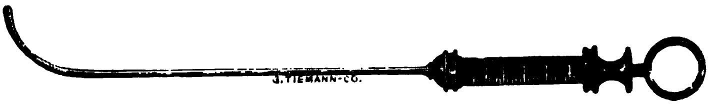


FIG. 355. Tobold's Laryngeal Syringe.


J. TIEMANN-CO.

ORAL, LARYNGEAL, AND ŒSOPHAGEAL INSTRUMENTS.

FIG. 356. Fullgraf's Laryngo-Tracheal Douche.

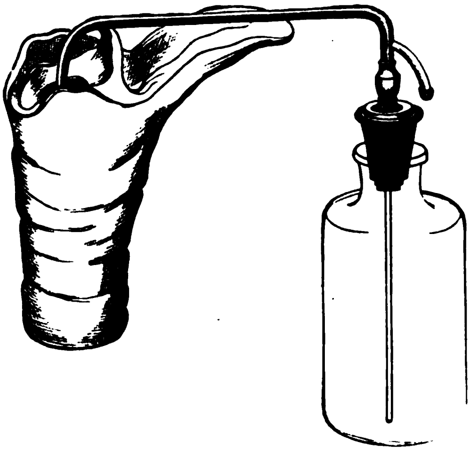


FIG. 357. Fullgraf's Flat-Bill Laryngeal Spray.

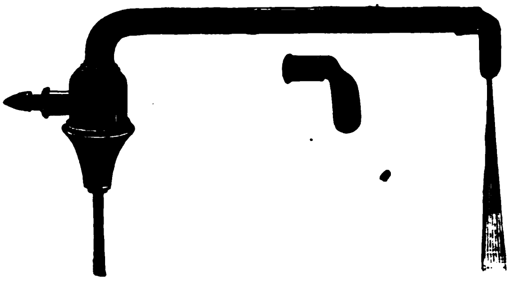


FIG. 358. Fullgraf's Glass Powder-Blowing Tubes, for the Posterior Nares.

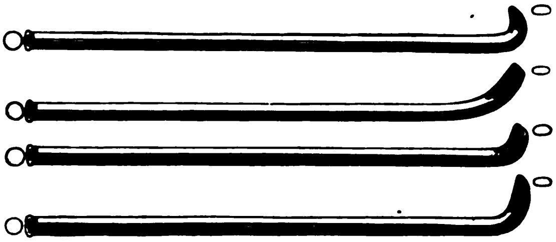
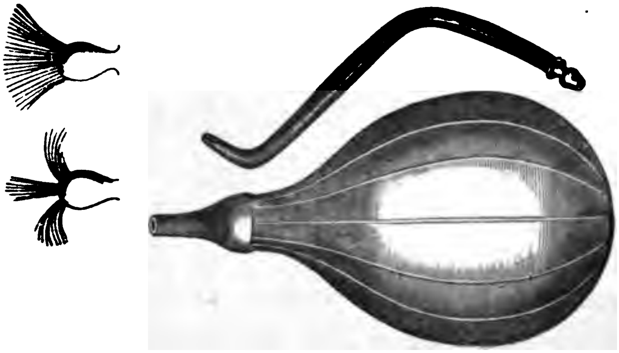


FIG. 359. Fullgraf's Laryngeal and Posterior Nares Douche.



INHALING APPARATUS.

FIG. 360. Bergson's Steam Atomizer.

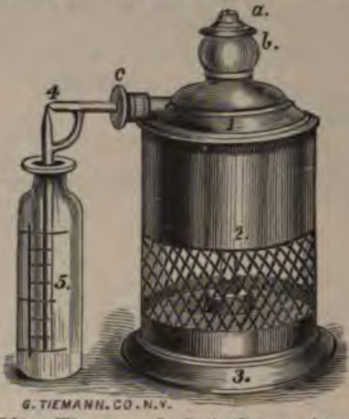


FIG. 361. Tiemann & Co.'s Steam Atomizer.

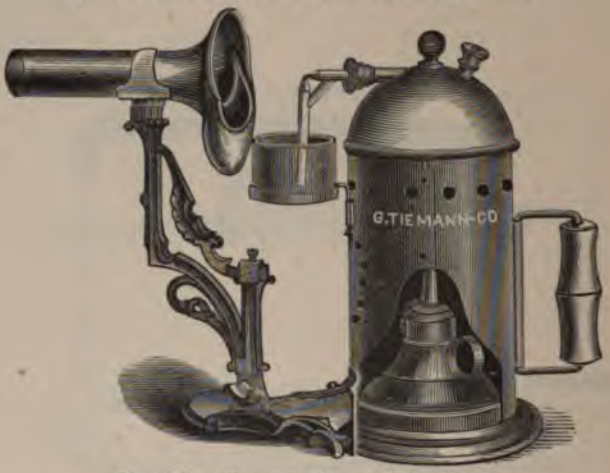
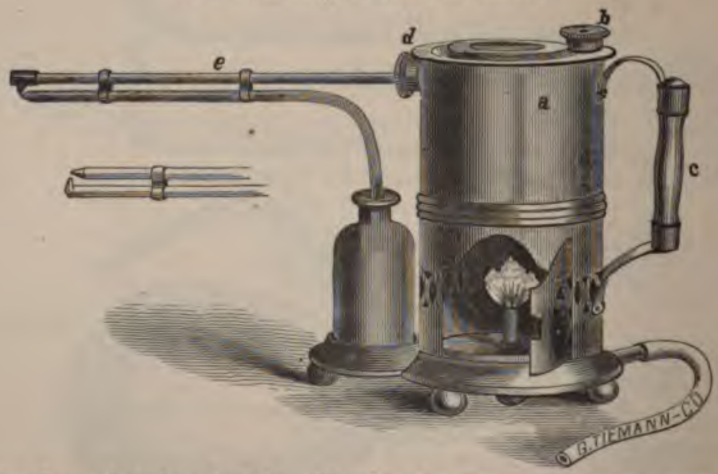


FIG. 362. Seeger's Steam Nebulizer.



All other Steam Atomizers for sale. Directions for use accompany each Instrument.

INHALING APPARATUS.

FIG. 363. Richardson's Spray Producer.

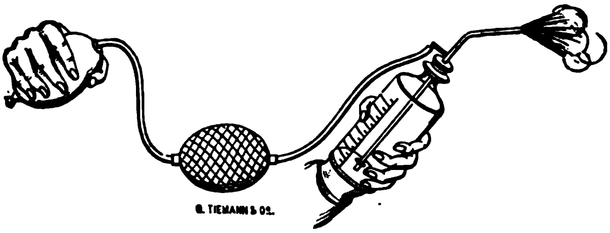

G. TIEMANN & CO.

FIG. 364. Sass' Spray Producer.

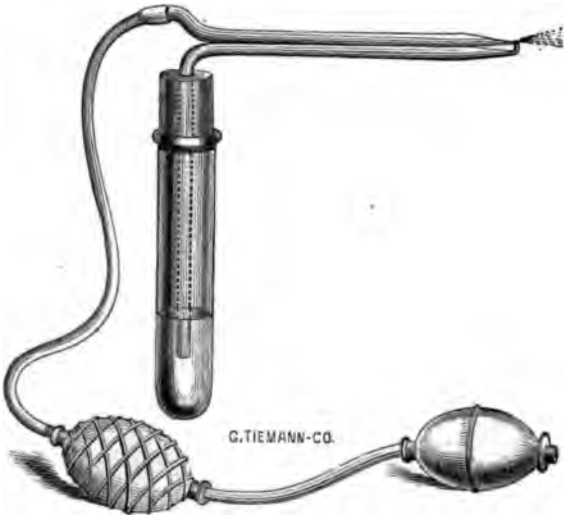
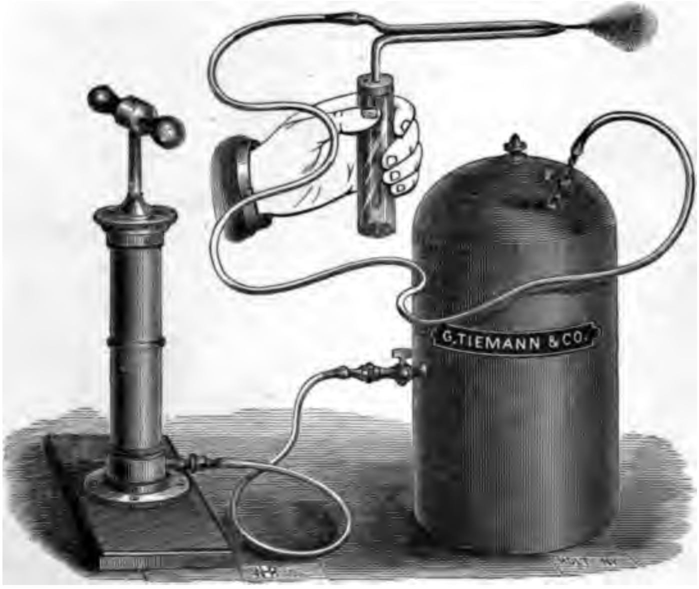
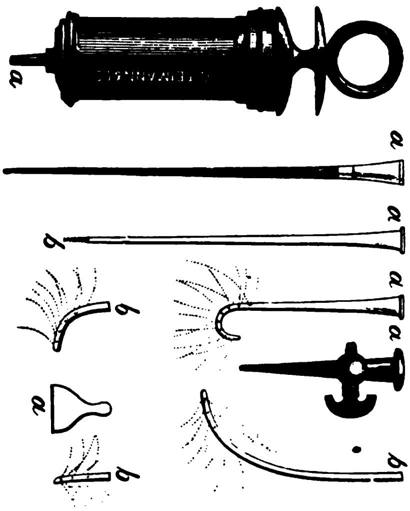

G.TIEMANN-CO.

FIG. 364*b*. Sass' Spray Producer, with Receiver and Air Pump.


G.TIEMANN & CO.

INHALING APPARATUS.

FIG. 364c. Tiemann & Co.'s Universal Syringe.



For Injections of Caustic Solutions, etc.; applicable to the Uterus, Male and Female Urethra and Bladder, Ear, Larynx, Nares; with a Hard Rubber Stopcock to fit Catheters or Trocars, for Hydrocele, etc.

FIG. 364e. Chapman's Nasal Spray.

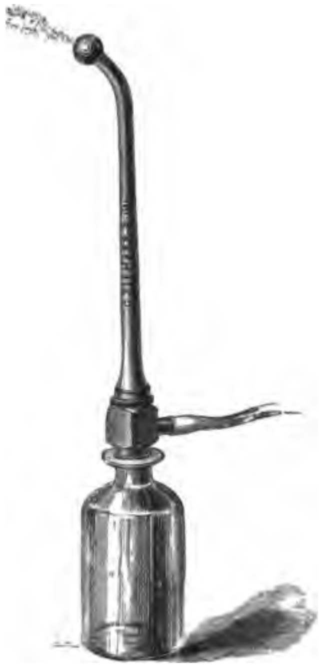


FIG. 364d. Warner's Catarrhal Douche.

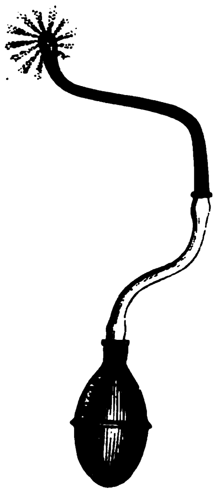


FIG. 364f. Ramage's Inhaler.

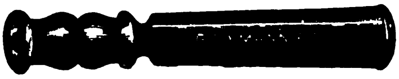
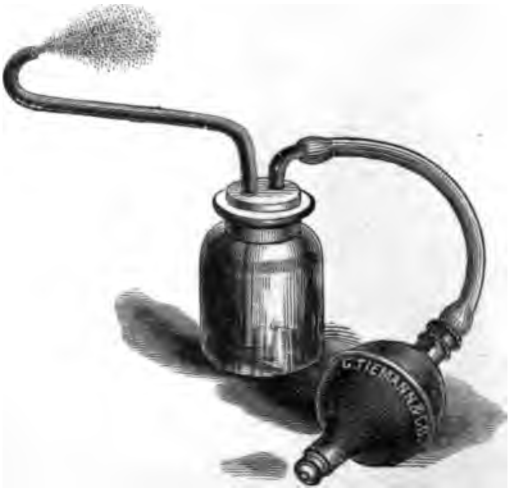


FIG. 364g. Robinson's Powder Blower.


G. TIEMANN & CO.

INHALING APPARATUS.

FIG. 365. Newman's Atomizer.

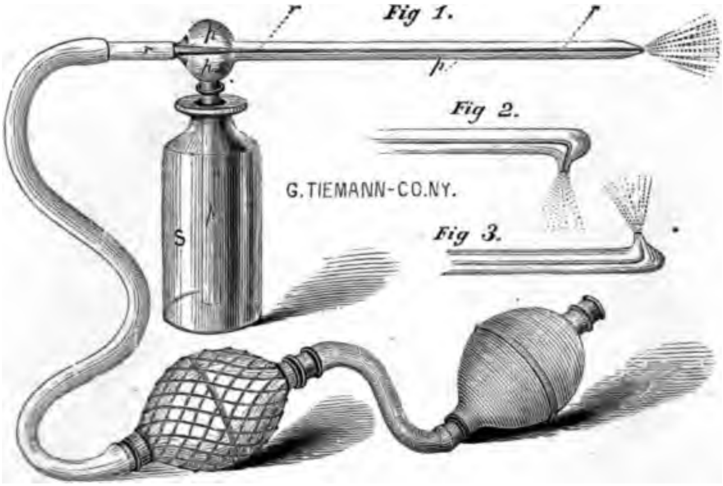
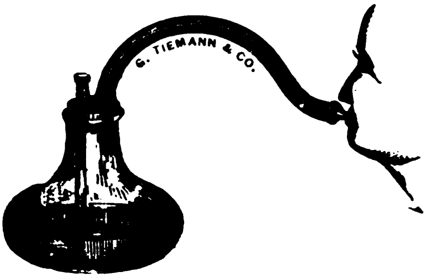


Fig 1.
Fig 2.
Fig 3.
G.TIEMANN-CO.NY.
r
h
p
S

FIG. 366. Hunter's Inhaler.


G. TIEMANN & CO.

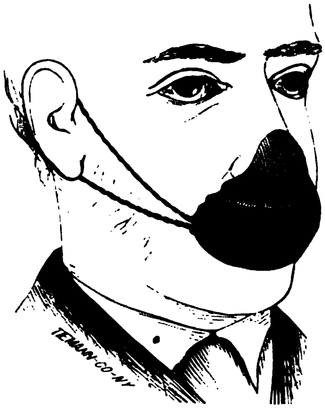


FIG. 367. Jeffrey's Respirator, for the Mouth, and Mouth and Nose.

FIG. 367*b*. Roe's Inhaler.

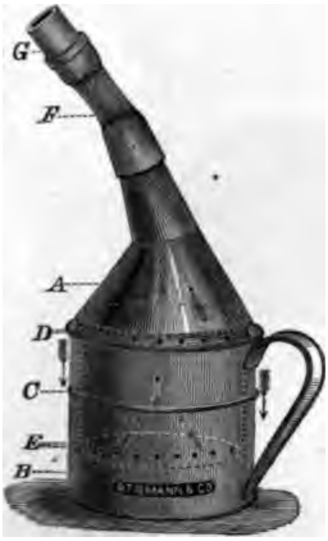
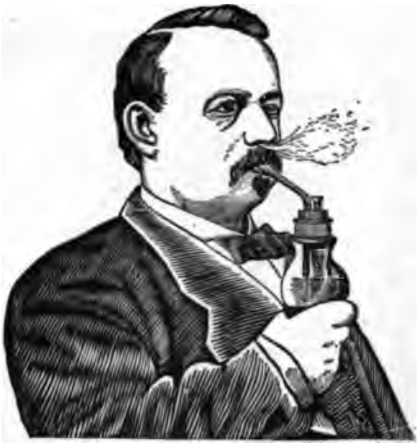


FIG. 367*c*. Schofield's Inhaler.



INHALING APPARATUS.

FIG. 367*d*. Mackenzie's Inhaler.

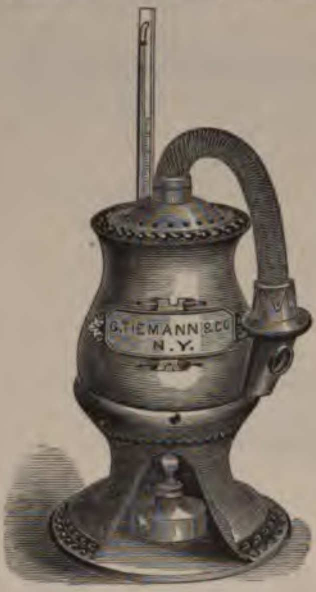


FIG. 367*e*. Croup Kettle.

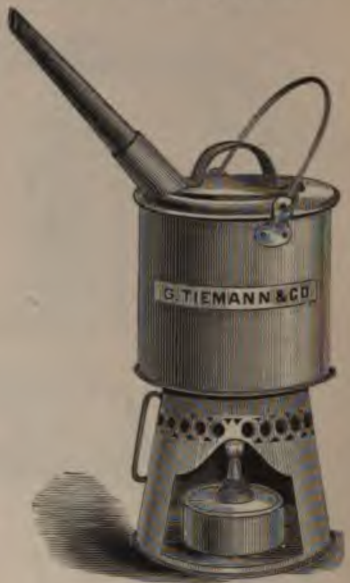

G. TIEMANN & CO.

FIG. 368. Dobell's Residual Air-Pump.

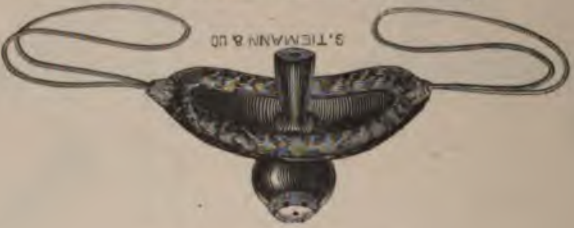
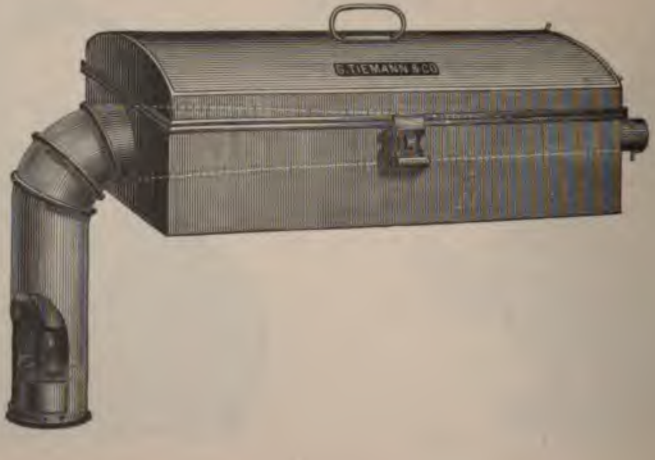


FIG. 368*b*. Hot Air Bath



TRACHEOTOMY INSTRUMENTS.

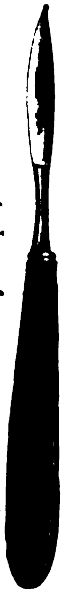


FIG. 371. Tracheotomy Scalpel, Probe Point.

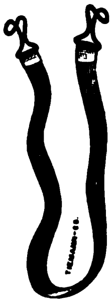
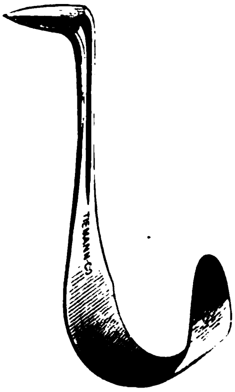


FIG. 369b. Well's Retractor.

FIG. 369. Buck's Tracheotomy Guide.



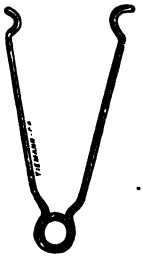


FIG. 369c. Rose's Retractor.

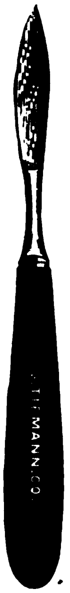


FIG. 372. Tracheotomy Scalpel, Sharp Point.

FIG. 370. Langenbeck's Tracheotomy Double-Hook.

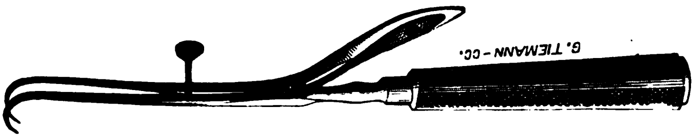
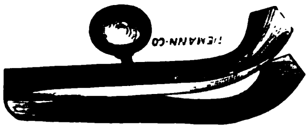


FIG. 373. Tiemann & Co.'s Tracheotome and Dilator.



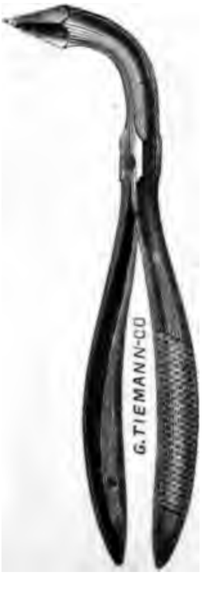


FIG. 374. Pitha's Tracheotome and Dilator.

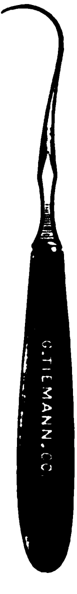


FIG. 375. Tracheotomy Blunt Hook.

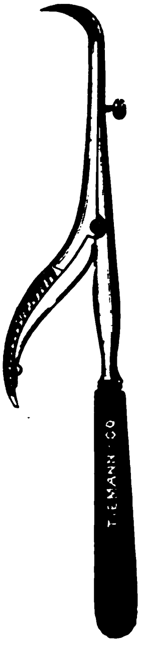
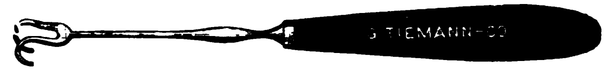


FIG. 376. Langenbeck's Tracheotome.

TRACHEOTOMY INSTRUMENTS.

FIG. 376*b*. Pilcher's Retractor.



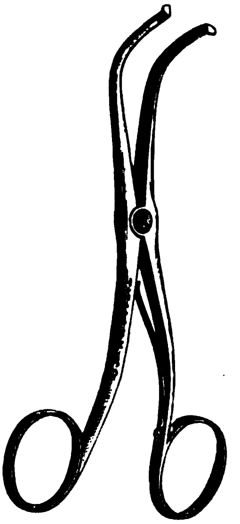


FIG. 377. Trousseau's Dilator, to facilitate the Introduction of Canulas.

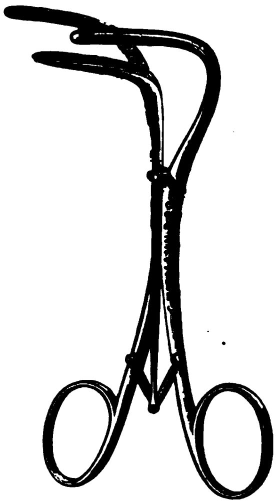


FIG. 378. Delaborde's Tracheal Dilator.

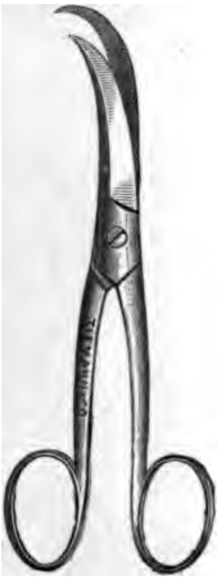


FIG. 378*b*. Tardieu's Trachea Scissors.

FIG. 379*b*. Finger Protector.

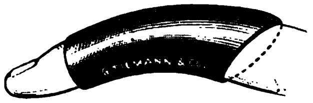


FIG. 381. Silver Trachea Canula.

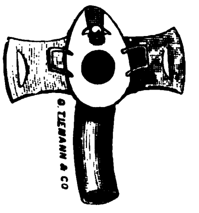
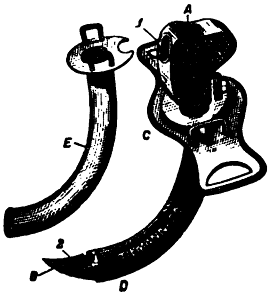


FIG. 381*b*. Hank's Tracheotome.



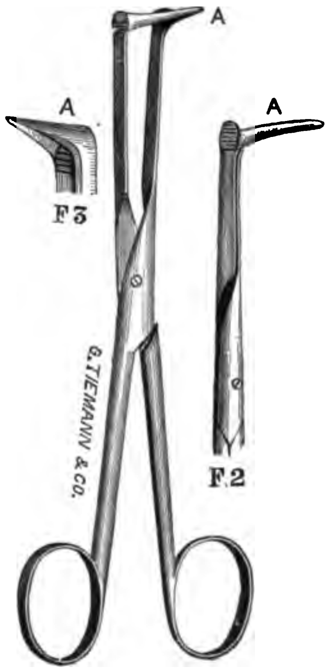


FIG. 379 Chassaignac's Tracheal Dilator.

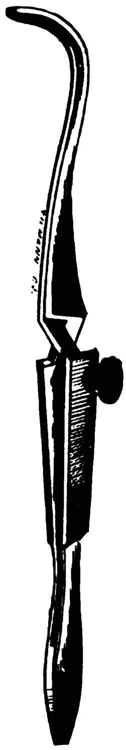


FIG. 380. Tiemann & Co.'s Universal Forceps.

TRACHEOTOMY INSTRUMENTS.

FIG. 382. Double Trachea Tube, Movable Plate, Silver.

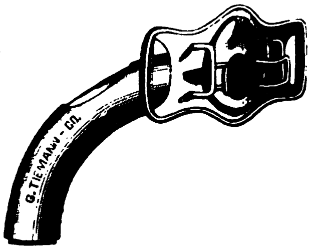

G. TIEMANN-CO.

FIG. 383. Double Trachea Tube, Silver, Plain.

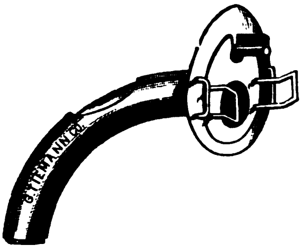

G. TIEMANN-CO.

FIG. 384. Mop, for Cleaning Canulas *in situ.*

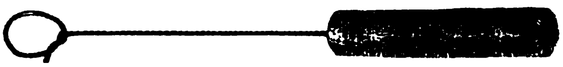


FIG. 385. Trachea Canula, Hard Rubber.

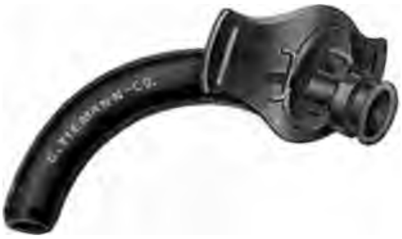

G. TIEMANN-CO.

FIG. 386. Gendron's Split Canula, Silver.

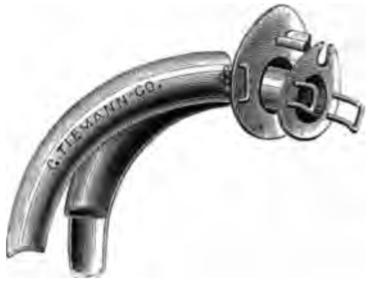

G. TIEMANN-CO.

FIG. 387. Trousseau's Forceps, for Removing Clots of Blood or Mucus from the Canula while *in situ.*

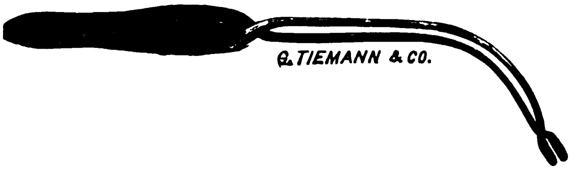

G. TIEMANN & CO.

FIG. 388. Tiemann & Co.'s Tracheal Forceps, for Removing Foreign Bodies.

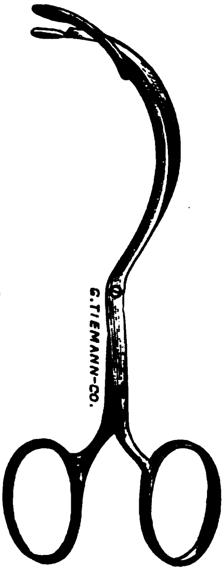
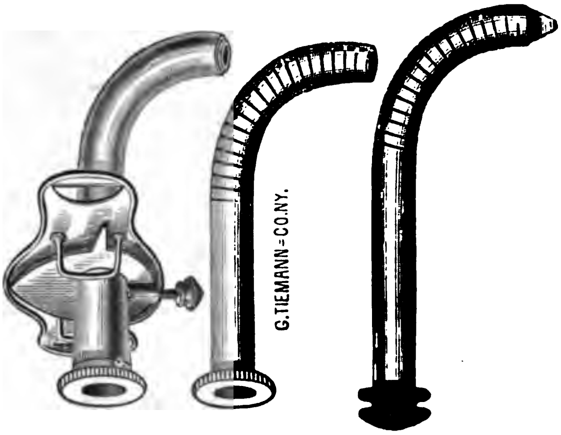
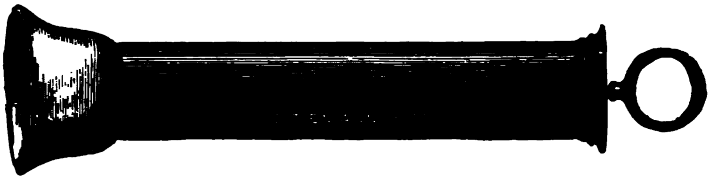

G. TIEMANN-CO.

FIG. 389. Johnson's Double Canula and Obdurator. Modification of Durham's.


G. TIEMANN-CO. NY.

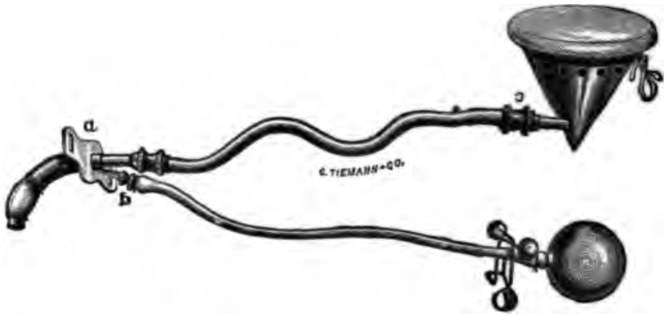
TRACHEA INSTRUMENTS.

FIG. 890. Tiemann's Tracheal Aspirator.



For clearing the trachea of blood-clods or mucus, after the insertion of the trachea-tube. It is simply a hard rubber syringe terminating into a soft rubber cup. This is easy of application over the inserted canula. If the thumb be placed on the air-hole of the barrel, the soft rubber cup applied, the piston drawn, mucus or clods of blood will enter the barrel. By taking the thumb off the air-hole, the instrument detaches easily, may be cleansed and used again if necessary.

FIG. 891. Trendelenburg's Trachea Tampon.



The Trachea-Tube (*a*) is made of silver. A soft rubber sheath is drawn over the front part of it. A small canula (*b*), to which a rubber hose and bulb attaches, admits of blowing air between the rubber sheath and the silver tube, inflating the rubber so as to completely fill the trachea; a clamp prevents it from collapsing. The object of this is to keep the blood from entering the trachea or lungs whilst the surgeon is operating in the throat above the instrument, at the same time the lungs are supplied with fresh air through the larger opening of the silver tube. An anæsthetic may be administered by connecting the Inhaling Apparatus (*c*) with it.

In using the apparatus, please observe the following:

1. Before drawing a tampon over the canula, moisten both parts with water.
2. Before inflation, warm the tampon a little.
3. Do not inflate the tampon except within the trachea or within a tube of like dimensions, say a speculum or other glass cylinder.
4. The tampon should not be too old.

SPIROMETERS AND PNEUMATIC APPARATUS.

FIG. 392. Richardson's Instrument to re-establish Respiration.

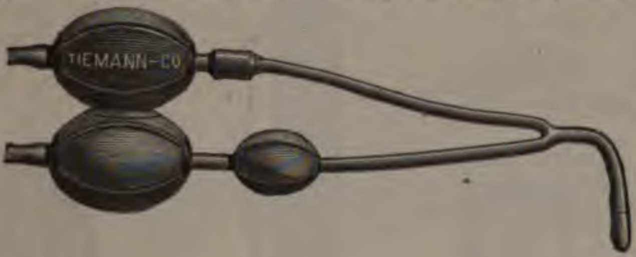


FIG. 393. Waldenburg's Pneumatic Apparatus.

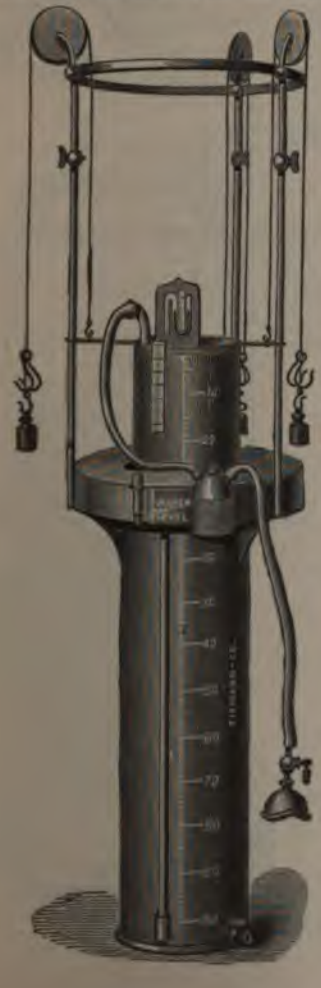
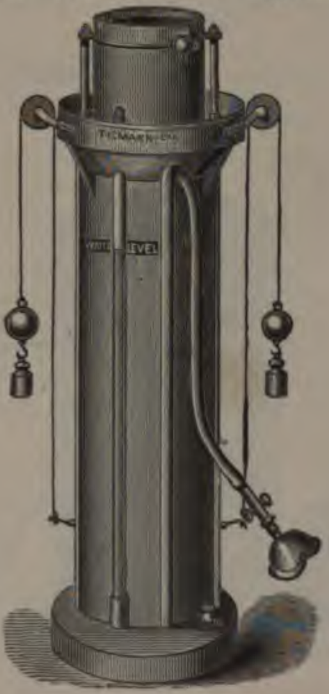


FIG. 394. Tobold's Pneumatic Apparatus.



SPIROMETERS AND PNEUMATIC APPARATUS.

FIG. 395. Waldenburg's Pneumatometer.

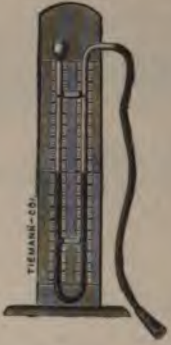


FIG. 396. Brown's Spirometer.

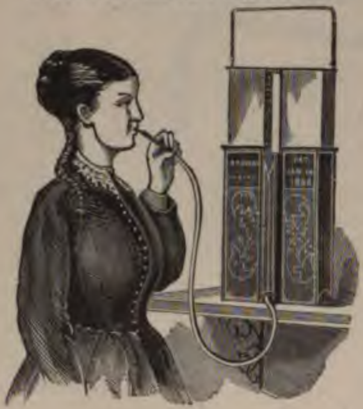


FIG. 397. Fränkel's Pneumatic Apparatus.

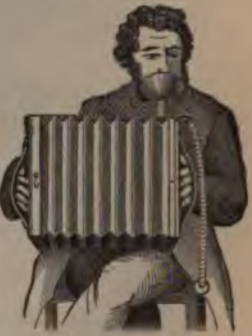


FIG. 398. Barnes' Spirometer.

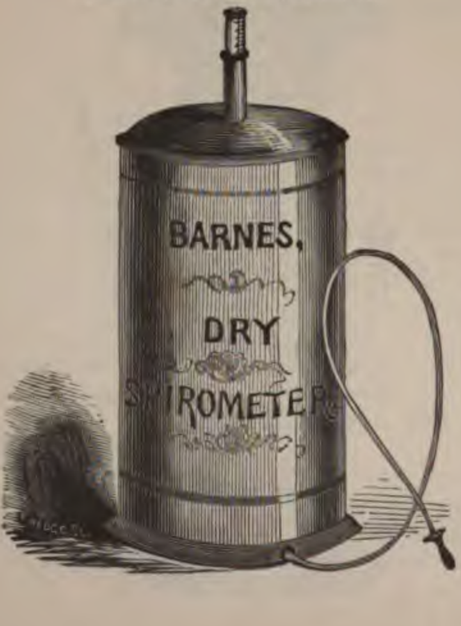
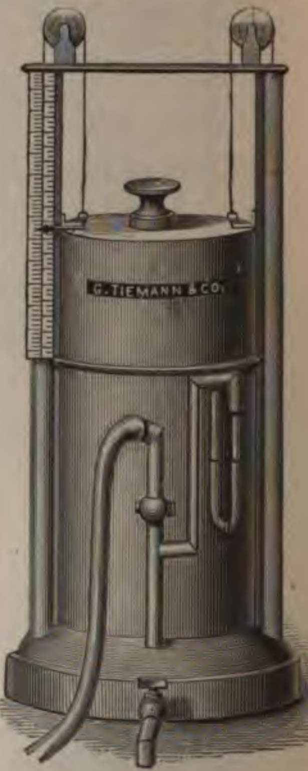
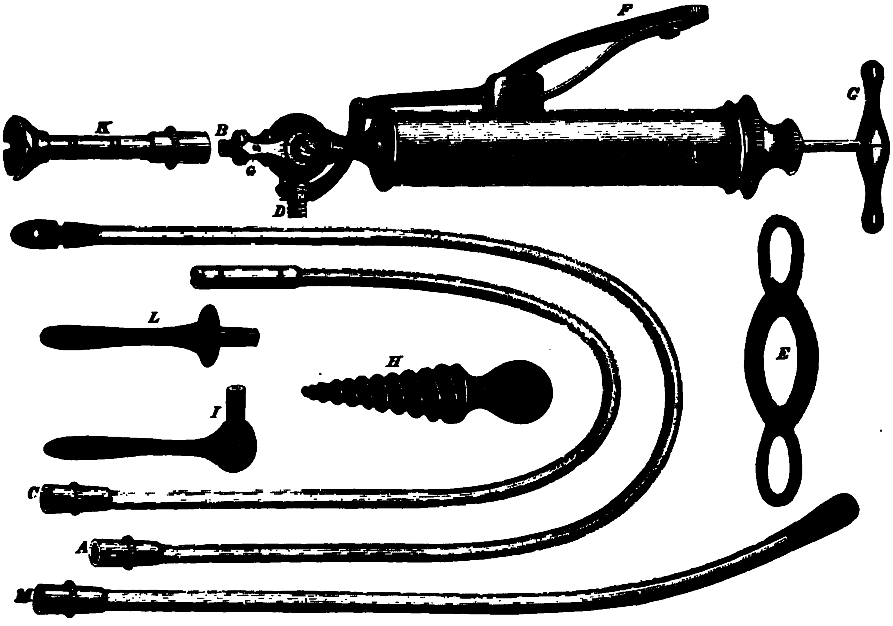


FIG. 399. Hutchinson's Spiromete


G. TIEMANN & CO.

INSTRUMENTS FOR THE ALIMENTARY CANAL.

FIG. 400. Lever Stomach Pump and Enema Apparatus.



DIRECTIONS.

When used as a Stomach Pump, attach the stomach tube (*a*) firmly on to the lower tap (*b*) of the pump, and affix the hose (*c*) on to the side tap (*d*). Place the mouth-gag (*e*) between the jaws of the patient, and introduce the stomach tube through the aperture; this mouth-gag serves the two-fold purpose of keeping the mouth open and of protecting the stomach tube against possible injury from the patient's teeth. After pressing the lever (*f*) down, which opens the instrument for aspiration, the piston is drawn out by the handle (*g*); this fills the barrel of the pump with part of the contents of the stomach, which are then ejected through the hose (*c*) by first letting the lever (*f*) loose, and then pushing the piston down. A few repetitions of this operation will relieve the stomach of its fluid or masticated contents. The hand (*s*) connected with the lever (*f*) indicates that tap of the instrument shut towards which its point is turned.

Before attempting to discharge the stomach of its contents a quantity of warm water should be pumped into it, as this will facilitate the operation very much.

To charge the stomach, merely reverse the action of the pump, having immersed the hose (*c*) into the fluid prepared for this purpose, which should be held in a narrow, deep bowl.

The hard rubber screw (*h*) is used for reducing lockjaw, or for forcing the mouth open, which is done by screwing it between the jaws.

WHEN USED AS AN INJECTING APPARATUS.

For self-administration, screw the hose (*c*) on the side tap (*d*) of the pump, affix the angular injecting pipe (*i*) in an upright direction into the other end of the hose, and adjust the short metal foot (*k*) to the lower end (*b*) of the pump. Place a basin, containing the enema, upon a chair, and sit upon another chair opposite; then, having introduced the pipe, hold the instrument upright in the fluid with one hand, working the handle up and down with the other in the same way as stated above. When the injection is administered to another person, the straight pipe (*l*) is used more conveniently.

The elastic tube (*m*), called "O'Beirn's" tube, is used for severe constipation of the bowels, and may be passed up to the arch of the colon.

N. B.—In affixing the tubes to and detaching them from the pump, their metal fittings only should be handled. After the use of gruel, or any thick fluid, wash out the instrument by pumping water through it. If the piston gets hard, and allows water to pass over it, it should be oiled, and a little worsted evenly wound around it under the leather, which will render it as perfect as at first.

FIG. 401. Tiemann & Co.'s Stomach Pump.

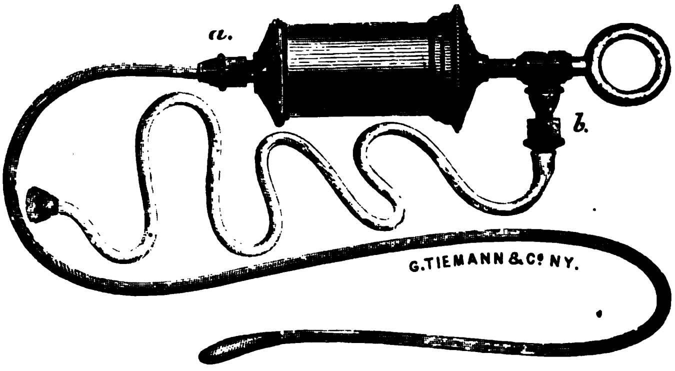
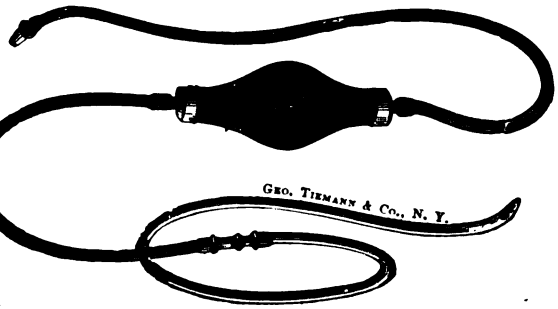
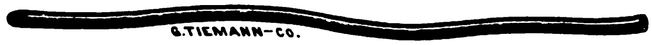


FIG. 402. Toswill's Syphon Stomach Pump.
(With directions for use.)



INSTRUMENTS FOR THE ALIMENTARY CANAL.

FIG. 403. Paine's Nasal Feeding Tube.



For feeding maniacs or persons who are unable or unwilling to open the mouth. This tube is made of soft rubber, with our patent velvet eye. Its advantages are that the introduction causes no pain; there is no struggling to weary the patient; all the food enters the stomach, and none is thrown about the room; respiration proceeds regularly, and even conversation may continue without hindrance. The objections to it are those against the much used stomach-tube; while, over that instrument, from the non-necessity of forcing open tightly clenched jaws, and because of the inability of the patient to prevent its passage, it holds a true and deserved supremacy. Its adaptability is not confined to cases of melancholia. It may be used in choking paretics or in paralysis of the throat from any cause; it might be used in fractures of the jaw, when teeth would otherwise be sacrificed; and in cancer of the mouth, or where food cannot be taken readily and naturally.

FIG. 404. Funnelled Feeding Tube (English and French).

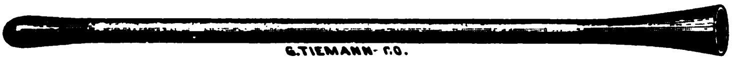
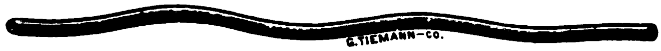
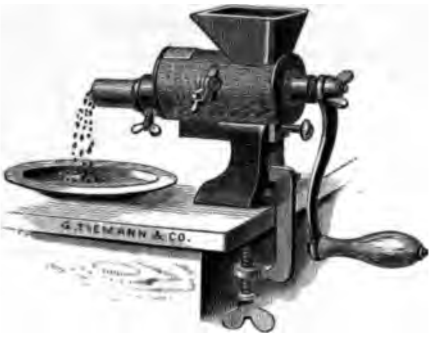


FIG. 405. Rectal Feeding Tube.



All the above may be used with funnels, or may have an attachment for the stomach pump.

FIG. 406. Masticator.


G.TIEMANN & CO.

For mincing meats. Useful to persons who have lost their teeth, or who are unable to masticate by reason of accident, disease or old age. Also for persons who refuse to take food on account of diseased mind.

FIG. 407. Tiemann & Co.'s Universal Douche (constant current).

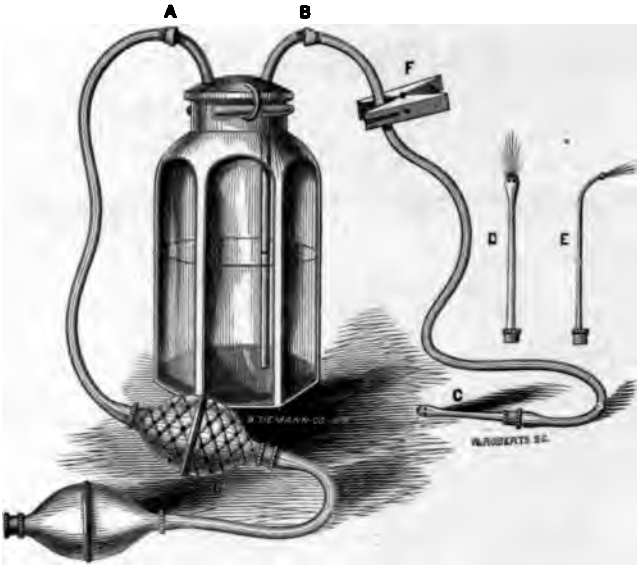
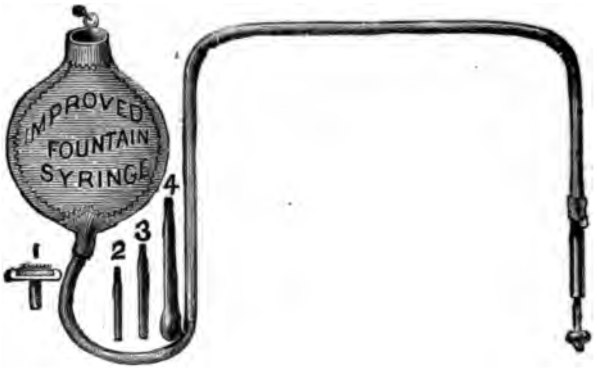


FIG. 408. Improved Fountain Syringe.



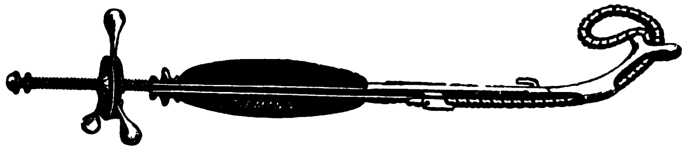
Operating automatically, dispensing with all pumping, valves, &c. They do not act spasmodically, and cannot inject air. They serve for injecting the rectum, vagina, urethra, ear, nose, &c.

Syphon Syringe,	fig. 553.	Part III.
Recto-Colonic Pump,	fig. 575.	Part III.
Maw's Enema Pump,	fig. 578.	Part III.
Universal Syringe,	fig. 377.	Part III.
Davidson's Syringe,	fig. 361.	Part III.
Syphon Syringe,	fig. 362.	Part III.
Woodward's Douche,	fig. 375.	Part III.

On hand, all sizes of Metal and Hard Rubber Syringes of the universally-known old style.

Anal and Rectal Instruments,	page 117.	Part III.
Hernia Instruments,	page 126.	Part III.

PART III.



EDWARDS' ECRASEUR.

Please do NOT MUTILATE this Book.

In ordering, merely state the Part of the Armamentarium, the Number of the Figure, and the Name of the article desired.

Instruments not mentioned in our Price List will be furnished at the lowest market rates.

When GOODS FOR REPAIR are directed to us, the Owner's Name and Address should accompany them. This will enable us to return them to the proper place and person.

Parties finding it convenient to order through dealers are requested to insist upon receiving our manufacture, as otherwise inferior goods are frequently substituted.

All instruments of our make have our name stamped upon them.

PART III.

GEO. TIEMANN & CO.'S SURGICAL INSTRUMENTS,

No. 67 Chatham Street;

Branch Store, No. 107 East Twenty-eighth Street,

NEW-YORK.

PREPUCE INSTRUMENTS.

FIG. 1. Fisher's Phymosis Forceps.

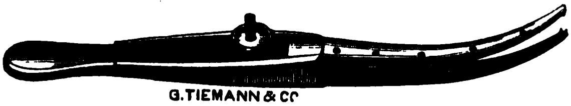


FIG. 2. Roger's Phymosis Forceps.

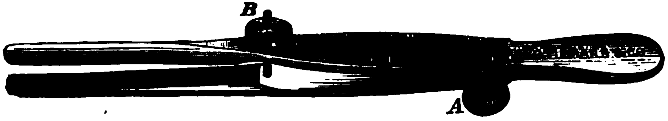


FIG. 3. Henry's Phymosis Forceps.

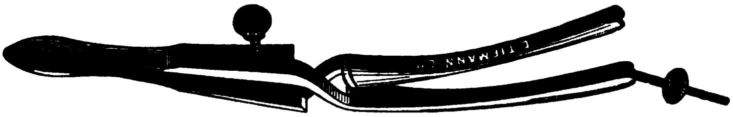


FIG. 4. Probe and Spatula for the Frænum.

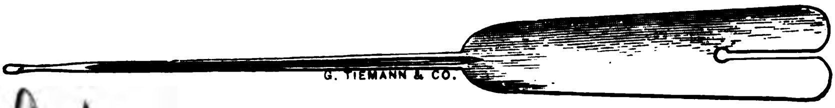


FIG. 5. Taylor's Phymosis Scissors.

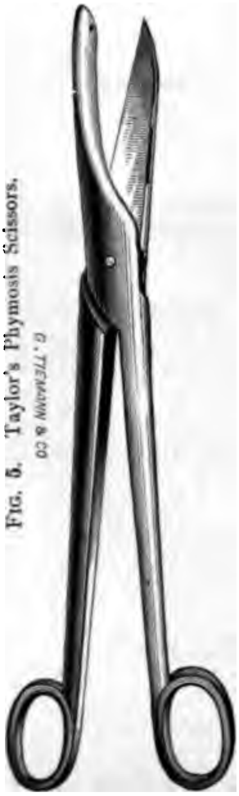


FIG. 6. Hutchison's Forceps for rupturing the mucous membrane of the prepuce.

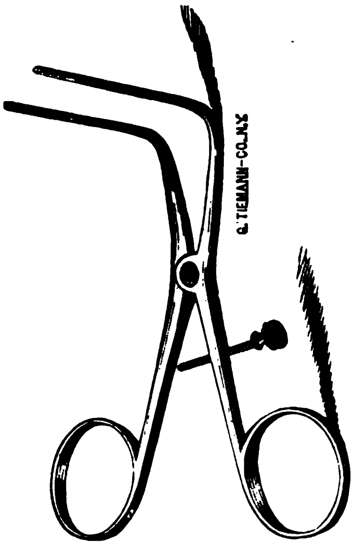
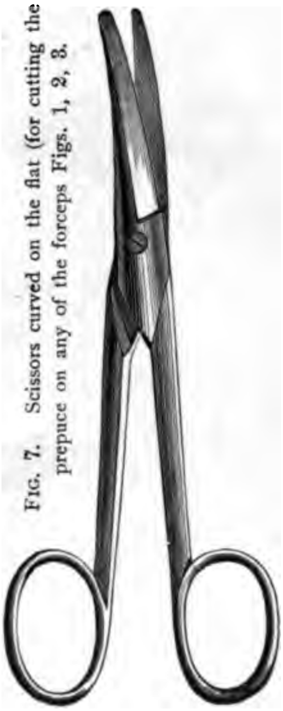


FIG. 7. Scissors curved on the flat (for cutting the prepuce on any of the forceps Figs. 1, 2, 3.



URETHRAL INSTRUMENTS.

DIAGNOSIS.

FIG. 8. Weir's Meatoscope.

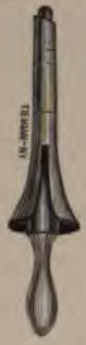


FIG. 8*b*. Skene's Folsom's Speculum.

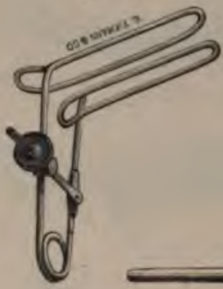


FIG. 9. Désormeaux's Endoscope.

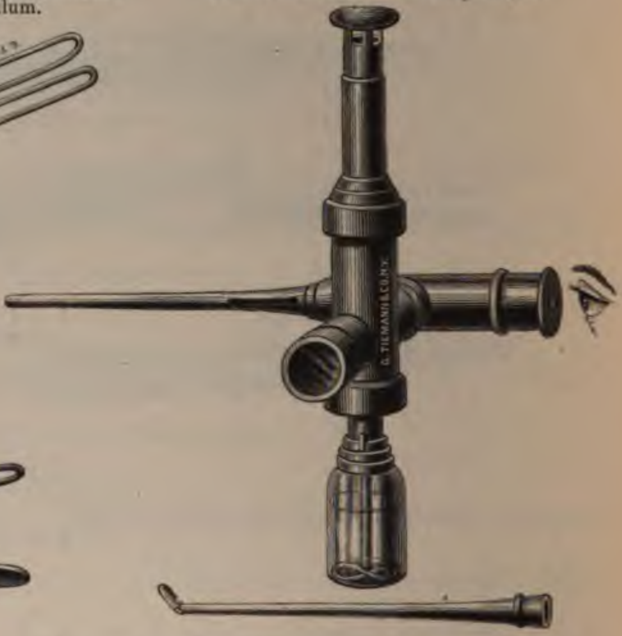


FIG. 8*c*. Otis' Dilator.

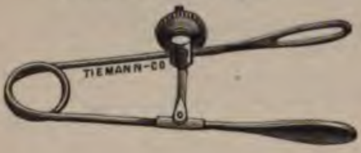


FIG. 10. Otis' Endoscopic Tube.

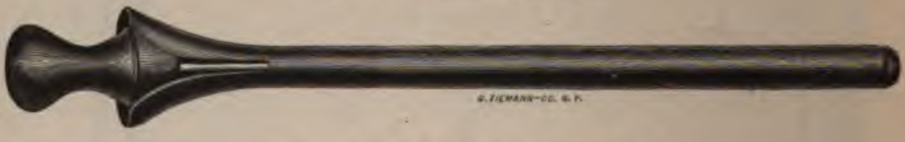


FIG. 11. Skene's Urethral Speculum.

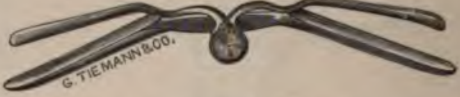
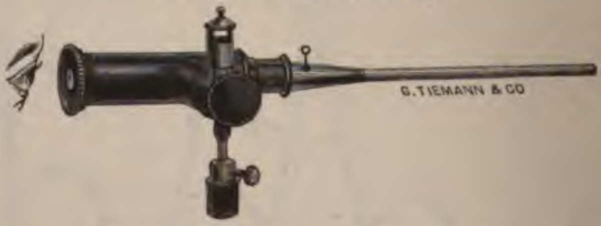


FIG. 11*b*. Laveur's Endoscope.



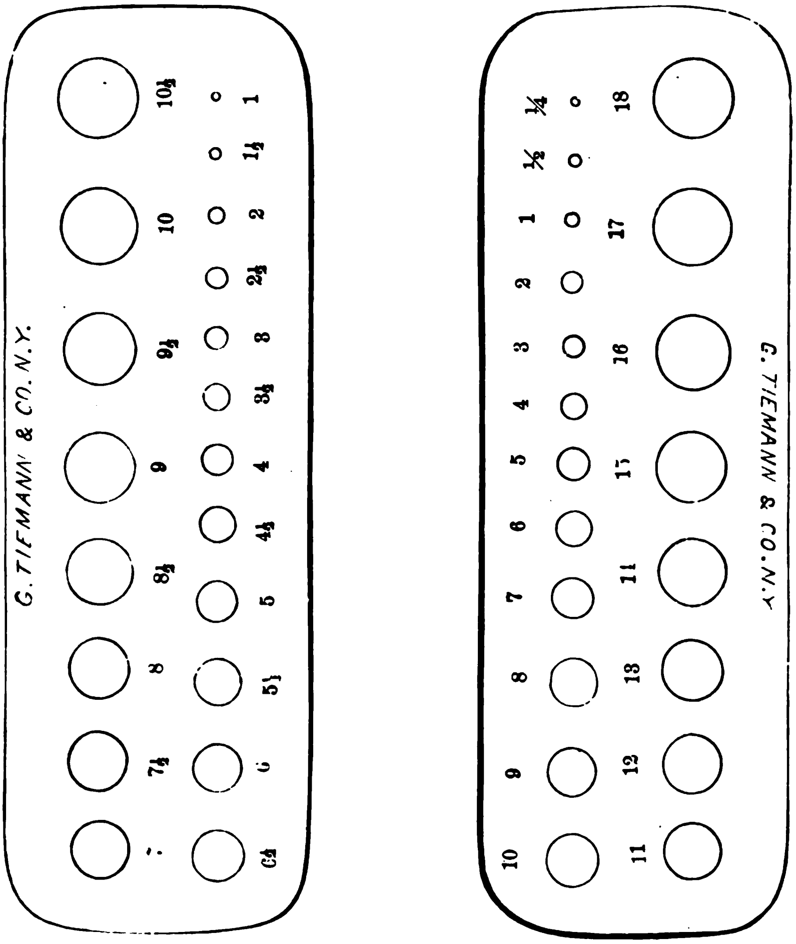
Skene's Endoscope, Fig. 59, Supplement

URETHRAL INSTRUMENTS.

SCALES OR GUAGES.

FIG. 12. Gouley's Metrical Sound Guage.

a. Metrical Diameter. *b.* English Numbers.



This Guage consists of twenty numbers, the smallest one millimetre, and the largest ten a half millimetres in diameter, with a difference between each two numbers of half a millimetre instead of one-third, as in the French scale. On one side of this Guage is stamped the diameter of each aperture in millimetres, and on the reverse side numbers from No. ¼ to No. 18, which very nearly correspond to the numbers of the English scale. Upon the handle of each Gouley's Sound both the English number and the metrical diameter are stamped.

GOULEY'S SET OF 12 CONICAL STEEL SOUNDS.

Nickel plated, highly polished, in a mahogany or rosewood case, lined with silk velvet.. ..$28 00

VAN BUREN & KEYES' SET OF URETHRAL INSTRUMENTS.

1	American Guage,	$ 4 50
12	Conical Steel Sounds, nickel-plated, 2d,	18 00
3	Whalebone Guides, 1 long, 2 short,	1 80
1	Otis' Catheter,	3 00
1	Silver-Plated Catheter, No. 12,	1 00
2	Silver-Plated Prostatic Catheters,	3 00
1	Thompson's Tunnelled Divulsor,	12 00
1	Civiale's Bistoury Caché,	5 00
1	Civiale's Urethrotome,	14 00
1	Gouley's Catheter Staff,	3 50
1	Pair of Urethral Forceps,	3 00
1	Cupped Sound, No. 12, nickel-plated,	2 75
4	English G. E. Catheters,	1 00
12	French G. E. Conical Bougies,	9 00
6	French G. E. Olivary Catheters,	6 00
4	Mercier's Elbowed Catheters,	5 00
17	Bougies à Boule,	17 00
1	Mahogany Case, lined with oil-dyed cotton velvet,	12 00
	Amount,	$121 55

BENIQUE'S SET OF STEEL SOUNDS.

12 Steel Sounds, Benique's Curve, nickel-plated. 1 Mahogany Case, lined with oil-dyed velvet, ... $28 00

SET OF PLAIN CYLINDRICAL STEEL SOUNDS.

12 Steel Sounds, Thompson's Curve, plain. 1 Mahogany Case, lined with oil-dyed velvet, ... $18 00

URETHRAL INSTRUMENTS.

FIG. 13. THE AMERICAN SCALE.

BY DRS. VAN BUREN AND KEYES.

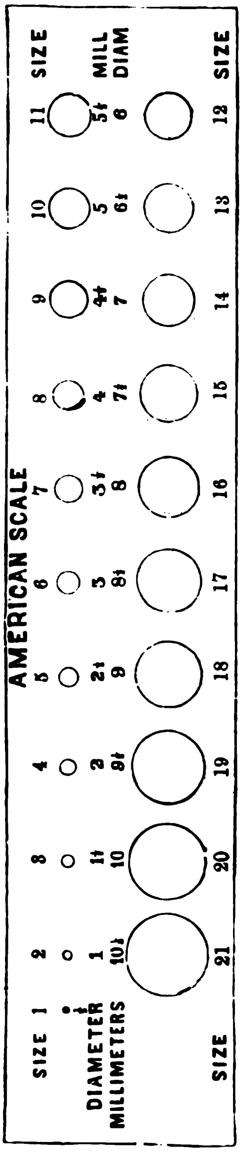


FIG. 38. American Scale, Front.

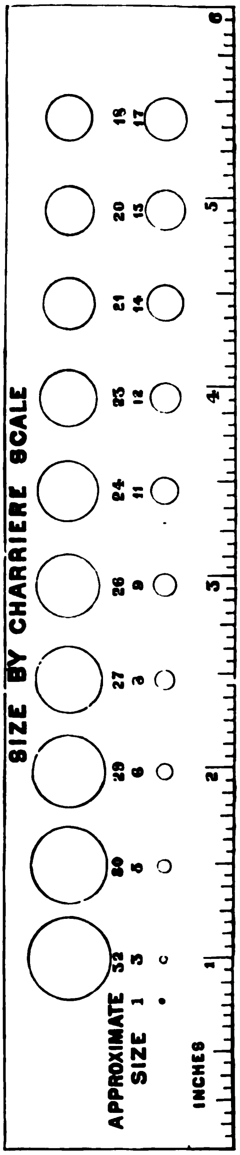


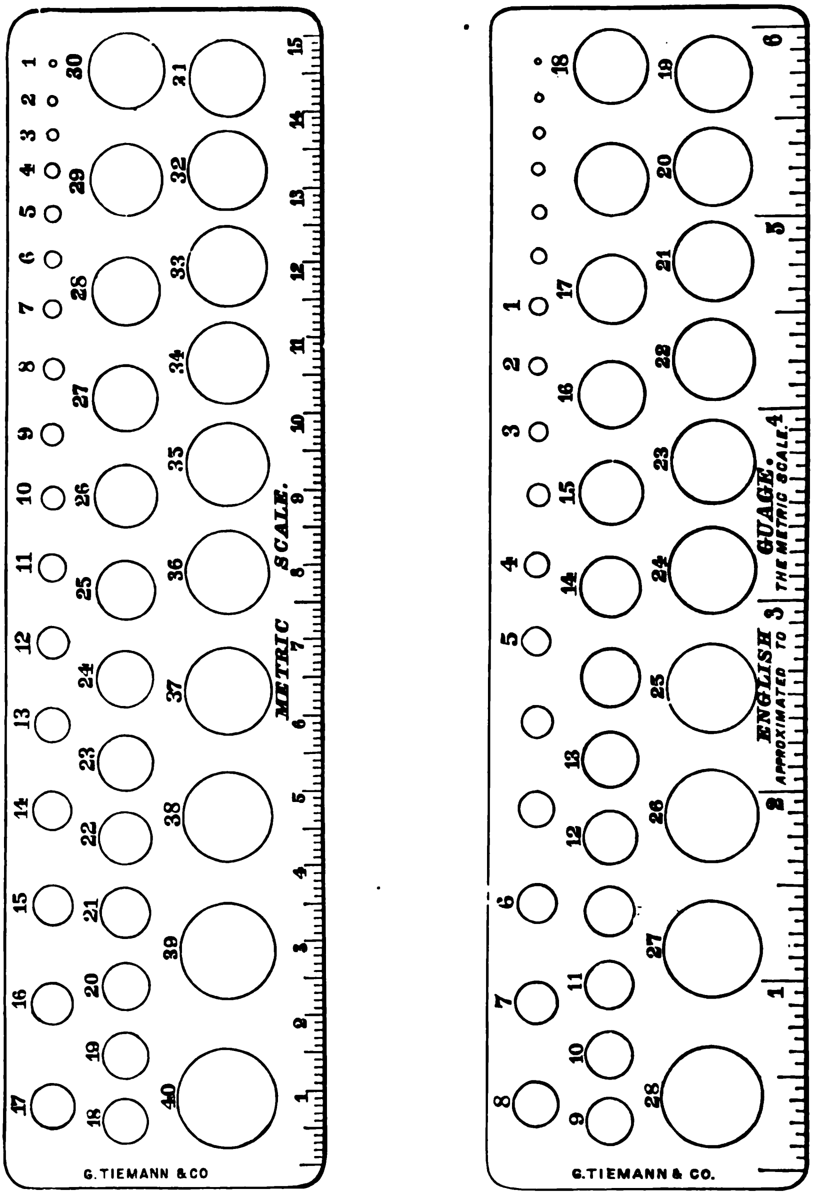
FIG. 39. American Scale, Back.

The diameter of each American size is ½ its number in mills. 15=7½ mill
For computing the *exact* corresponding French size, add ½ of itself to any American size.
French numbers are made American by subtracting ⅓: 30 Fr.=(30—10), 20, 12=8, 3=2.

URETHRAL INSTRUMENTS.

FIG. 14. **THE METRIC SCALE.**

Comparison of the French and English Sound Guages, enlarged to No 40 French = No. 28 English, by Dr. Otis.



URETHRAL INSTRUMENTS.

FIG. 14*b*. *Proper Curves* for unyielding Urethral Instruments.

RECOMMENDED BY

DR. THOMPSON, A. B. E.	DR. GOULEY, A. B. E.
" VAN BUREN, A. B. E.	" BENIQUE, C. B. D.
" BUMSTEAD, F. B. E.	" OTIS, F. B. E.

See the works of the above authors for particulars.

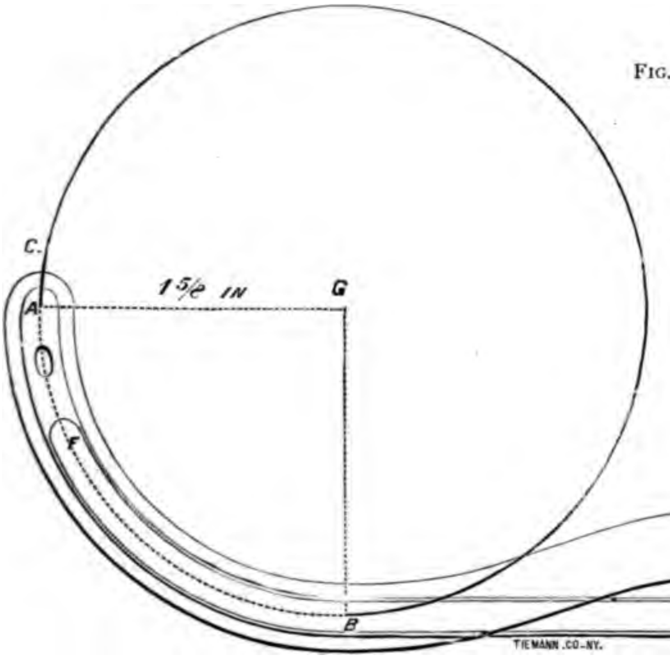
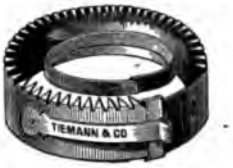


FIG. 14*c*. Spermatorrhœa Ring.



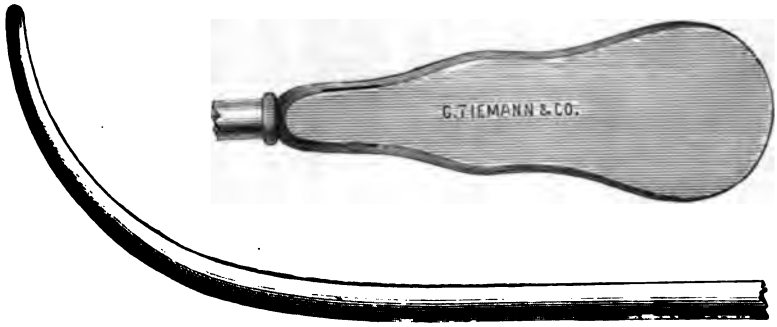

G. TIEMANN & CO.

FIG. 15. Conical Steel Sound.

FIG. 16. Straight Conical Steel Sound.

G.TIEMANN-CO.

VAN BUREN & KEYES' COMPACT SET
OF
URETHRAL INSTRUMENTS.

1	Grooved Staff,	$ 2	00
3	Whalebone Guides, 1 long, 2 short,	1	80
4	Tunnelled Sounds,	12	00
1	Thompson's Probe-Pointed Catheter, modified by Otis,	3	00
1	Silver Catheter, No. 12, short curve,	2	25
1	Thompson's Tunnelled Divulsor,	12	00
1	Civiale's Bistoury Caché,	5	00
1	Civiale's or Maisonneuve's Urethrotome,	14	00
1	Gouley's Catheter Staff,	3	50
1	Silver Probe,	0	36
1	Small Scalpel,	0	80
1	Silver Director-Probe	1	50
1	Curved Trocar,	3	00
1	Double Silver Tube,	3	00
1	Morocco Case, with extra spaces, lined with oil-dyed cotton velvet, silk finish,	12	00
	Amount,	$76	21

VAN BUREN'S SET OF CONICAL STEEL SOUNDS.

12	Conical Steel Sounds, nickel-plated. 1 Mahogany Case, lined with oil-dyed velvet,	$28 00

VAN BUREN'S SET OF CONICAL STEEL SOUNDS
OF EXTRA FINE FINISH.

12	Conical Steel Sounds, nickel-plated, 1 Rosewood Case, lined with silk velvet,	$35 00

GOULEY'S COMPLETE STRICTURE SET.

(SUPERIOR FINISH.)

6	Steel Sounds, conical, @ $1 75,	$10 50
1	Gouley's Divulsor, nickel-plated,	12 00
1	Gouley's Retention Catheter,	3 50
1	Gouley's Catheter Staff,	3 50
6	Gouley's Tunnelled Sounds, @ $3.	18 00
1	Gouley's Meatotome,	3 00
1	Director Probe, silver,	1 50
1	Beaked Bistoury	1 50
5	English Bougies à boule, @ $1.	5 00
12	English olive-pointed Bougies,	9 00
6	English Gum Catheters	2 00
6	Whalebone Guides,	3 60
2	English Tunnelled Catheters,	2 00
1	Metrical Sound Guage, German silver,	2 50
1	Gouley's Dilating Urethrotome, 2 points,	15 00
1	English and French Rule,	0 40
1	Rosewood Case, lined with silk velvet,	16 00
		$109 00

The same Set in a Mahogany Case, lined with cotton velvet, the Sound Guage of Paper, $105 00

GOULEY'S COMPACT STRICTURE SET.

4	Conical Steel Sounds, nickel-plated, @ $1 75,	$ 7 00
3	Gouley's Tunnelled Sounds, @ $3	9 00
1	Gouley's Retention Catheter,	3 50
1	Gouley's Dilating Urethrotome, 2 points,	15 00
1	Gouley's Meatotome,	3 00
1	Gouley's Catheter Staff,	3 50
1	Beaked Bistoury,	1 50
1	Grooved Director Probe, silver,	1 50
1	Mahogany Case, (with extra spaces), lined with oil-dyed cotton velvet,	6 00
		$50 00

URETHRAL INSTRUMENTS.

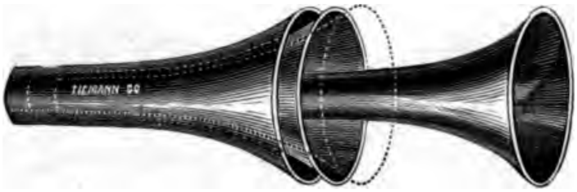


FIG. 18. Glass Meatoscope.

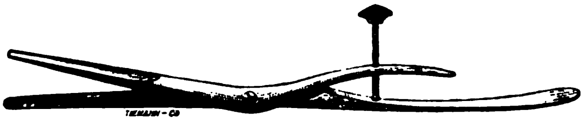


FIG 19. Gouley's Meatotome.

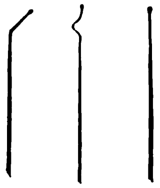


FIG. 21.
Points of Gouley's
Whalebone Guides.

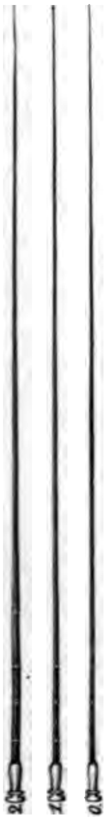


FIG. 20. Nos. 0, 1, 2. Gum Filiform Bougies.

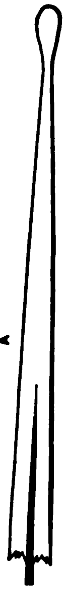


FIG. 22. Thompson's Leaden Stileted Olivary Bougie.

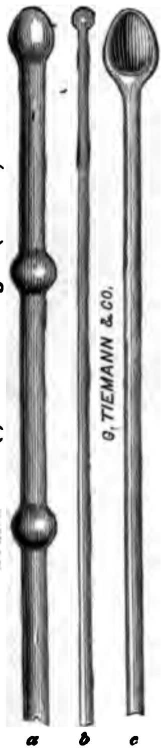


FIG. 23. (a) Knotted Bougie (à nœuds); (b) Bell's Ball Probe or Urethral Sound and (c) Bulbous Bougies (à boule).

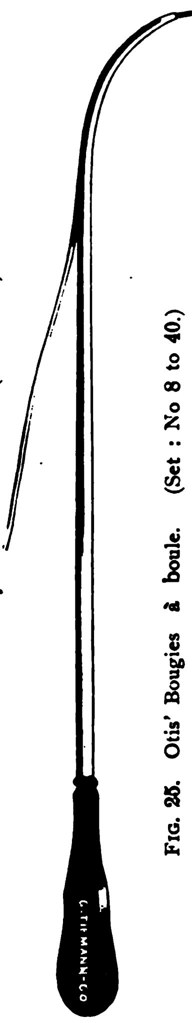


FIG. 24. Gouley's Tunnelled Sound (and Guide).

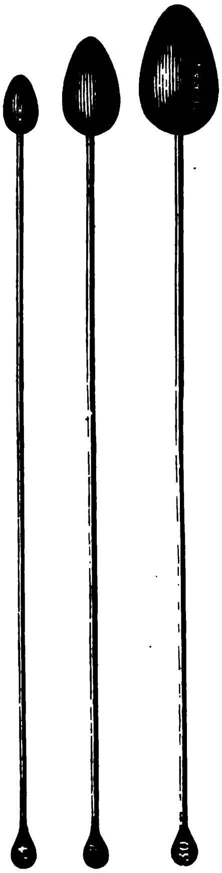


FIG. 25. Otis' Bougies à boule. (Set : No 8 to 40.)

BUMSTEAD'S SET
OF
URETHRAL INSTRUMENTS.

A.

1	Bumstead's Maisonneuve Urethrotome,	$14 00
1	Set of Holt's Divulsors,	18 00
1	Bumstead's Retention Catheter,	4 00
12	Filiform Bougies, with screw-heads to fit all the above instruments,.	12 00
1	Civiale's Bistoury Caché,	5 00
1	Trocar and Canula,	3 00
1	Thompson's Probe-Pointed Catheter,	3 00
1	Pair of Thompson's Urethral Forceps,	3 00
1	Silver Catheter, No. 8, French scale,	2 25
1	Silver Catheter, No. 22, French scale,	2 25
1	Silver Prostatic Catheter,	3 00
1	Silver Female Catheter,	1 00
1	Syme's Staff,	2 00
6	G. E. Conical Bougies,	4 50
6	G. E. Olive-Pointed Pougies,	4 50
6	Acorn-Pointed G. E. Bougies	6 00
9	Bumstead's Steel Sounds, nickel-plated, A,	23 50
1	Bumstead's Guage,	3 00
1	Rosewood Case, lined with silk velvet,	18 00
	Amount,	$132 00

Bumstead's Set of Urethral Instruments B.

Contains the same number of instruments as No. A, but the Steel Sounds are second quality, nickel-plated, and the lining of the case is oil-dyed cotton velvet, ... $120 00

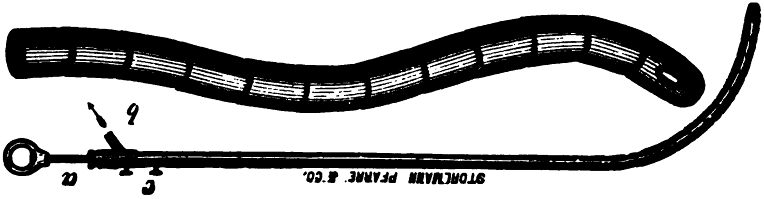
BUMSTEAD'S SET OF STEEL SOUNDS.

12 Bumstead's Steel Sounds, nickel-plated, 1 Mahogany Case, lined with oil-dyed velvet, ... $28 00

URETHRAL INSTRUMENTS.

PROSTATIC CATHETERS.

FIG. 26. Caro's Modification of Squire's Vertebrated Catheter



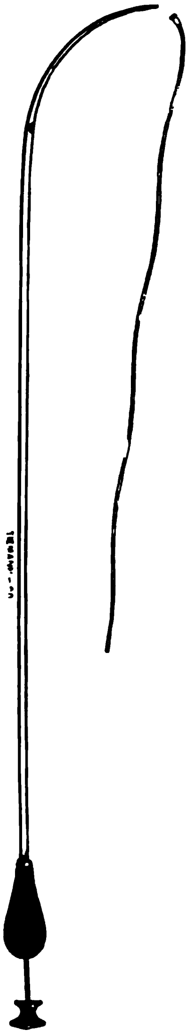


FIG. 27. Bumstead's Modification of Thompson's Catheter.

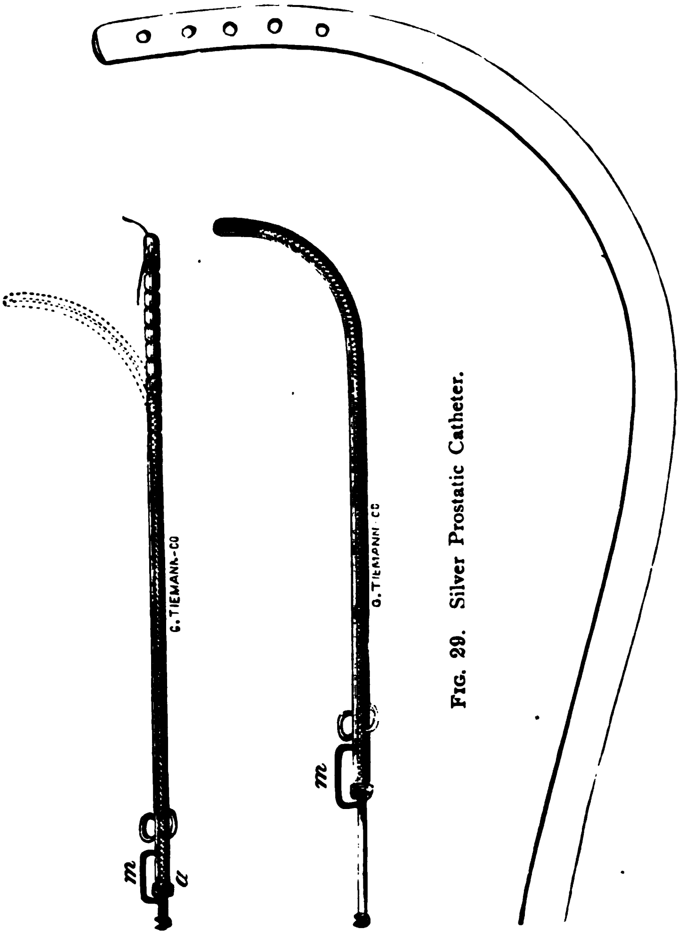


FIG. 28. Cowan's Vertebrated Catheter.

FIG. 29. Silver Prostatic Catheter.

FIG. 30. Olivary Gum Catheter.

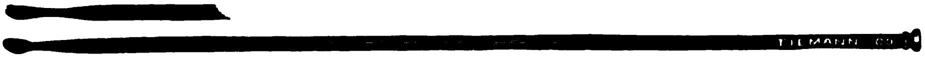
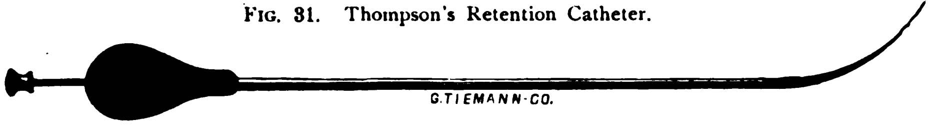


FIG. 31. Thompson's Retention Catheter.



VAN BUREN & KEYES' SET OF INSTRUMENTS FOR STONE.

1	Thompson's Searcher,	$ 4 00
1	Thompson's Lithotrite, heavy,	35 00
1	Thompson's Lithotrite, light,	35 00
1	Evacuating Catheter, Nott's,	4 50
1	Pair Urethral Forceps, Thompson's,	2 50
2	Lithotomy Staffs, lateral, @ $2.	4 00
1	Median Lithotomy Staff,	2 00
1	Lithotomy Scalpel,	2 00
1	Lithotomy Bistoury, straight, sharp pointed,	2 00
1	Blizard's Knife,	2 00
1	Blunt Gorget,	2 50
1	Little's Director,	2 00
1	Scoop,	2 50
1	Pair of Lithotomy Forceps, with crossed handles,	3 00
1	Pair of Lithotomy Forceps, with curved blades,	3 00
1	Pair of Crushing Forceps,	6 00
1	Tube with globular head, for washing the bladder,	2 00
1	Shirted Canula,	1 50
1	Keith's Tenaculum,	1 25
1	Mahogany or Rosewood Case, lined with oil-dyed velvet,	18 00
	Amount,	$134 75

LITHOTOMY SET.

2	Steel Sounds,	$ 2 00
3	Lithotomy Staffs,	6 00
1	Liston's Bistoury,	2 00
1	Blizard's Bistoury,	2 00
1	Lithotomy Scalpel,	1 50
1	Scoop and Conductor,	2 50
2	Lithotomy Forceps, medium and small,	5 00
1	Double Current Catheter, silver,	6 50
1	Hard Rubber Syringe, with a stopcock to fit the Catheter,	4 50
1	Mahogany or Rosewood Case,	15 00
	Amount,	$47 00

URETHRAL INSTRUMENTS.

CATHETERS.

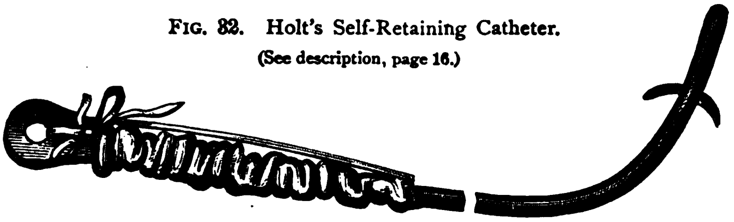
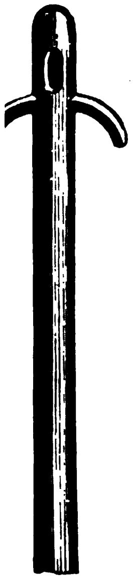


FIG. 82. Holt's Self-Retaining Catheter.
(See description, page 16.)



Description of Hutchinson's Prostatic Catheter.

(Fig. 85.)

A silver prostatic catheter, with a large eye in its concavity, permitting of the introduction of a portion of india-rubber tube through it. The india-rubber tube is shown in position.

After introducing the tubing into the bladder, the catheter is withdrawn, and a small nozzle, with rings, is introduced into the end of the india-rubber tube to allow of its being fixed to the penis. A stiletted plug for the nozzle, intended in the first place to plug its orifice, and in the second to stiffen the first three inches of the tube, will prevent its being bent and expelled.

The nozzle, having been passed into the meatus, is fastened firmly to the penis by means of tapes and plaster. Take care that it is fixed pretty tightly and with good plaster, and instruct your patient never to take the plug out excepting when he wishes to void urine.

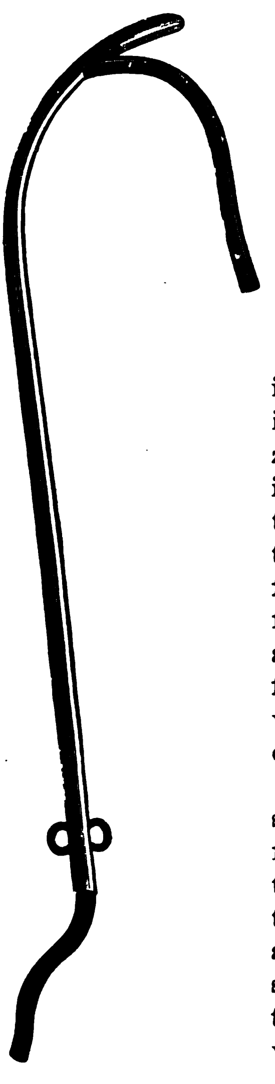
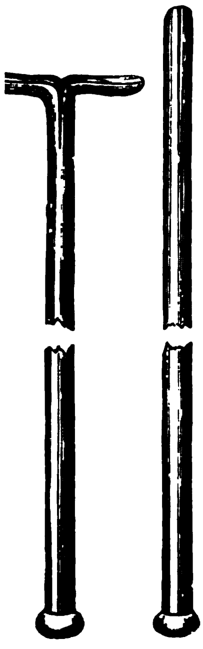


FIG. 85. Hutchinson's Prostatic Catheter.



MAY'S LITHOTOMY SET.

1 Pair of Lithotomy Forceps, large,	$3 00
1 Pair of Lithotomy Forceps, medium,	3 00
1 Pair of Lithotomy Forceps, small,	3 00
3 Plain Steel Sounds, @ $1	3 00
2 Lithotomy Staffs, @ $2	4 00
1 Canula à Chemise,	1 50
2 English G. E. Catheters,	0 50
1 Sharp-Pointed Lithotomy Scalpel,	2 00
1 Probe-Pointed Lithotomy Scalpel,	2 00
1 Probe-Pointed Lithotomy Bistoury	2 00
1 Hard Rubber Syringe, No. 5, the nozzle to fit the Catheters,	3 00
1 Mahogany Case, lined with oil-dyed velvet,	12 00
Amount,	$39 00

THE MANNER OF INTRODUCING HOLT'S SELF-RETAINING CATHETER (*figs.* 32, 33).

The Catheter is stretched upon the stilet, and fastened to the handle ready for introduction, which is affected as follows:—

Suppose the Catheter a No. 8 guage; insert the stilet and draw the india-rubber upon it towards the handle, until the size of the Catheter is reduced to a No. 4. Fix it in that situation by tying a piece of string immediately in front of the puckered portion, and fasten it to the hole in the handle. Thus the calibre of the Catheter is reduced one half, and will easily enter the bladder. The string may now be untied, and the Catheter will resume its ordinary size. Where the urethra is sufficiently capacious, the Catheter, previous to being used, may be passed into a No. 12 silver Catheter, having an opening *at the end*, and when in the bladder the silver Catheter may be withdrawn. (See fig. 35.)

VULCANIZED INDIA-RUBBER CATHETERS. (*See fig.* 40.)

In the case of old men affected with retention of urine without stricture, MM. Richet, Maisonneuve, &c., employ vulcanized India-rubber sounds, as do many of our own surgeons. This flexible sound, even in cases where there exists considerable enlargement of the prostate, seems to find its own way in the urethra with the utmost facility. It causes less irritation than others when left in the urethra. The latest improvement is Tiemann & Co.'s Velvet Eye Catheter, fig. 38, Supplement.

SET OF SILVER CATHETERS.

12 Silver Catheters, one bottle for oil, one guage, one Mahogany Case, lined with fine velvet,	$25 00

SKENE'S URO CYSTIC AND URETHRAL SET.

2	**Skene's Urethral Specula**	$3 00
1	**Folsom's Speculum (modification)**	1 50
1	**Skene's Reflux Catheter for Bladder**	2 00
1	**Skene's Reflux Catheter for Urethra**	2 00
2	**Silver Probes**	75
1	**Sponge Holder (steel wire)**	50
1	**Knife (wire)**	75
1	**Blake's Polypus Snare (Ear)**	3 50
1	**Allen's Polypus Forceps (Ear)**	4 50
2	**Glass Pipettes, 6 inches long**	50
2	**Head Mirrors, on same strap, 3½ in. and 1½ in.**	12 00
1	**Lente's Caustic Cup**	3 00
2	**Skene's Self-Retaining Catheters (modification of Goodman's)**	2 00
2	**Rectal Endoscopes (long and short) with Fenestrated Rubber Specula,**	6 00
3	**Urethral Endoscopes (Nos. 13, 15, 17, American,) with Beveled Rubber Specula**	6 75
2	**Beveled Urethral Endoscopes (Nos. 19, 21, American,) with Fenestrated Rubber Specula**	4 50
1	**Brush for cleaning Endoscopes**	10
1	**Rosewood or Mahogany Case, lined with oil dyed velvet**	10 00
	Amount	$63 35

LITTLE'S MEDIAN LITHOTOMY SET.

4	**Little's Staffs, Nos. 7, 9, 10, 12**	$8 00
1	**Straight sharp-pointed Bistoury**	2 00
1	**Little's Director**	2 50
1	**Pair Dressing Forceps**	1 50
2	**Pairs Lithotomy Forceps**	6 00
1	**Thompson's Searcher**	5 00
1	**Small Sound, for children**	1 00
1	**Canula à chemise**	1 50
1	**Hard Rubber Syringe, No. 5, nozzle to fit Catheters**	3 00
1	**Dolbeau's Stone Crusher**	6 00
1	**Lithotomy Scoop, ebony handle**	2 50
1	**Mahogany Case, lined with oil dyed velvet (or morocco covered, if preferred**	15 00
	Amount	$54 00

URETHRAL INSTRUMENTS.

CATHETERS.

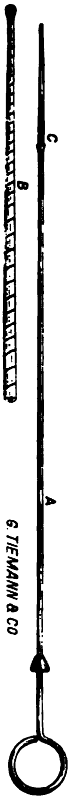


FIG. 36. Otis' Prostatic Guide for Soft Rubber Catheters.

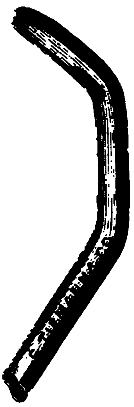


FIG. 37. Mercier's Double Elbowed Catheter.

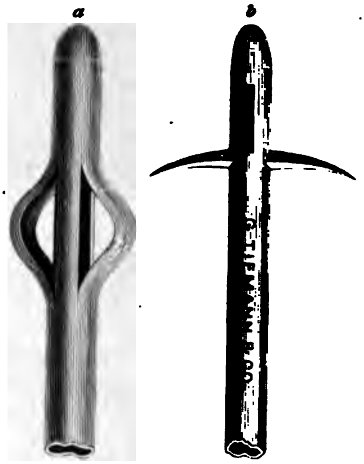
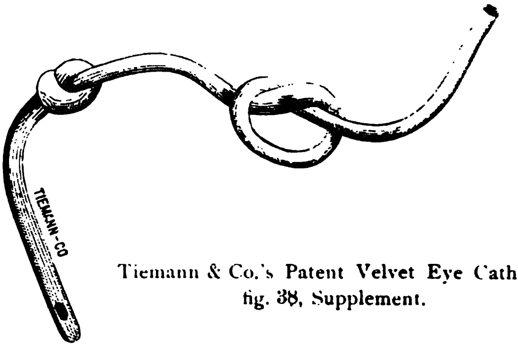


FIG. 38 (*a*, *b*). Holt's Self-Retaining Catheters.

FIG. 39. Mercier's Elbowed Catheter.

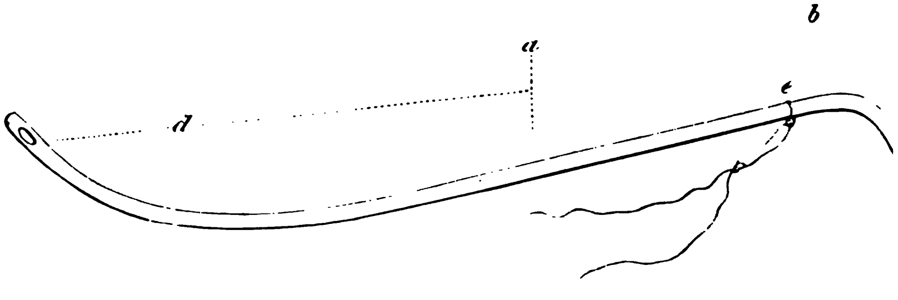
FIG. 39½. Keyes' Catheter Guide.

FIG. 40. Soft Rubber Catheter (Vulcanized). *See page* 16.



Tiemann & Co.'s Patent Velvet Eye Catheter,
fig. 38, Supplement.

FIG. 41. Thompson's Improved Vulcanized India-Rubber Catheter.



A to B shows the length of the German-silver tube which at this part lines the tube and stiffe

C. Anterior portion of Catheter, which remains flexible, and conducts away the urine ; a fitted into it.

D. Posterior portion of Catheter, which remains flexible, and rests in the urethra and bladde

E. A piece of stout silk, the free ends of which, lightly tied behind the glans penis, sec Catheter in its place.

URETHRAL INSTRUMENTS.

FIG. 42. Teevan's Tunnelled Catheter and Guide.

The conducting bougie is made of whalebone, and is excessively fine, having each end olive-shaped, which prevents the instrument from pricking the mucous membrane or lodging in the lacunæ; it must be two inches longer than the Catheter. The Catheter is about the size of a No. 1 English, and its end is cut off to permit the bougie to enter the canal at A and emerge at B, through the slit extending from B to C, which serves as a groove for subcutaneous or external urethrotomy. 2 shows that the groove is made by cutting out a longitudinal piece of the Catheter. Urine will not escape through it, for the mucous membrane is tightly stretched across it, and so completely closes the groove.

FIG. 42. Teevan's Tunelled Catheter and Guide.

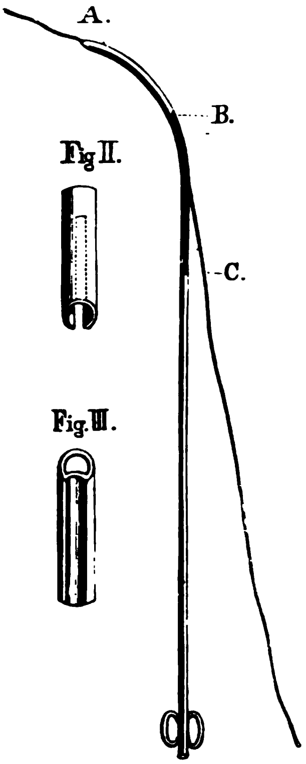
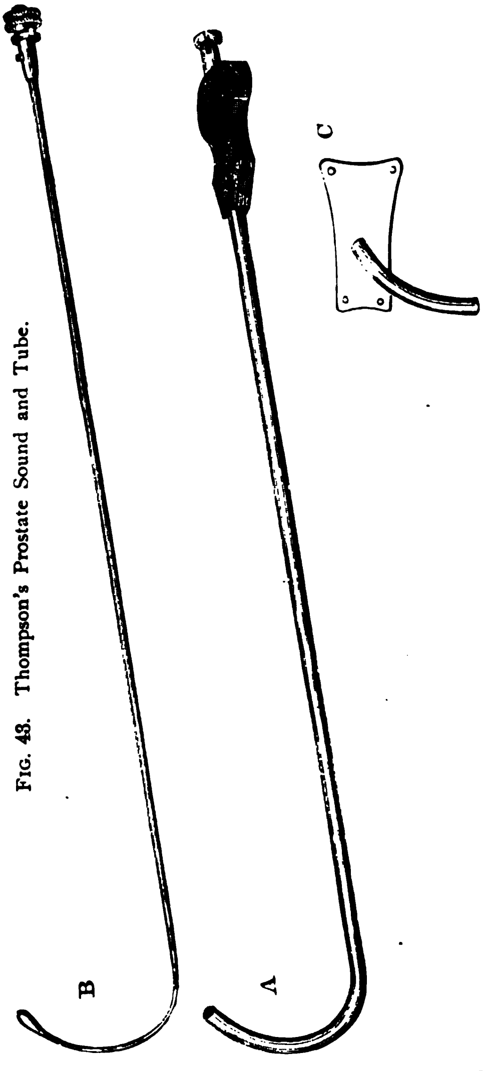


FIG. 43. Thompson's Prostate Sound and Tube.



A. Hollow sound, the end of which, when stopped with the stylet (B), forms the point which guides the operator in finding the bladder in the last incision. Size about 12 or 13 Engl.

B. Bulbous-ended flexible metal stylet.

C. Suprapubic tube of elastic gum about 2¼ in. long, with silver plate, introduced in its whole length into the sound when the stylet is removed. The withdrawal of the sound leaves the tube in the bladder.

Also, Mason's Improvement of Thompson's Prostate Sound and Tube.

URETHRAL INSTRUMENTS.

CATHETERS.

FIG. 44. Reginald Harrison's Pessary Catheter.

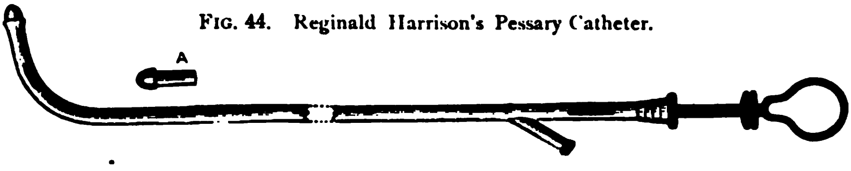


FIG. 44b. Hüter's Flat Catheter.

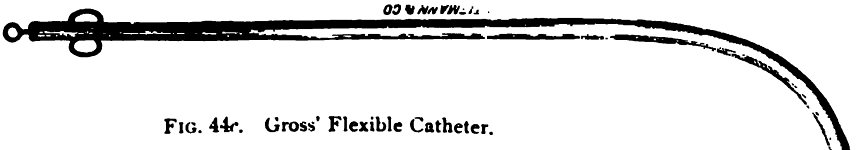


FIG. 44c. Gross' Flexible Catheter.

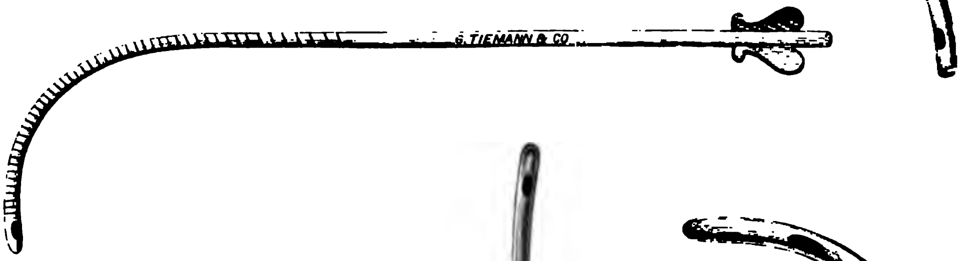


FIG. 45. Parker's Compound Male and Female Catheter and Caustic Holder.

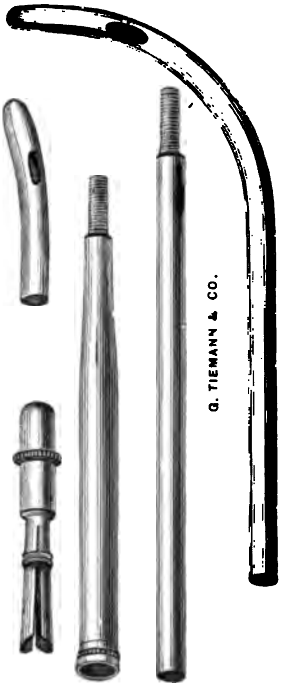


FIG. 46. Catheter Holder (Penis Muzzle).

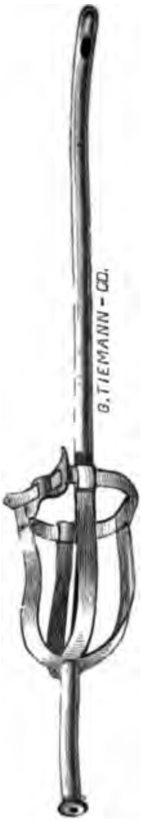
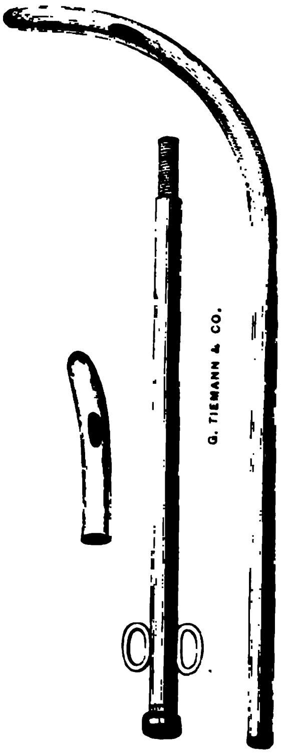


FIG. 47. Compound Male and Female Catheter.



URETHRAL INSTRUMENTS.

URETHRAL SYRINGES AND APPLICATORS.

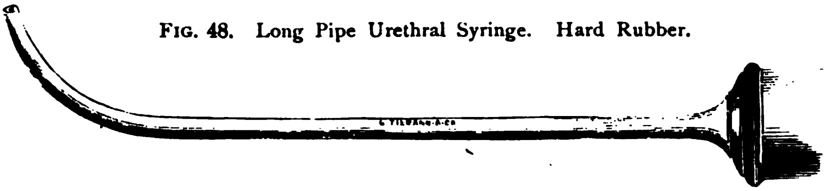


FIG. 48. Long Pipe Urethral Syringe. Hard Rubber.

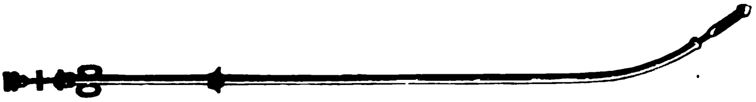


FIG. 49. Lallemand's Port Caustique.

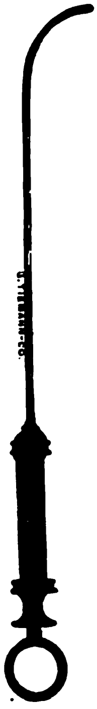


FIG. 50. Bumstead's Urethral Syringe.

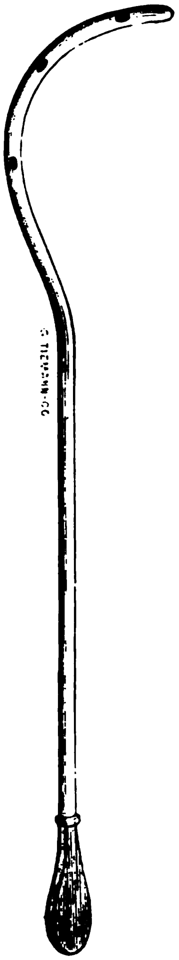


FIG. 51. Ointment Bougie.

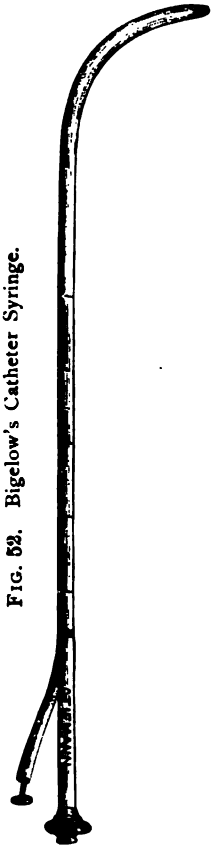


FIG. 52. Bigelow's Catheter Syringe.

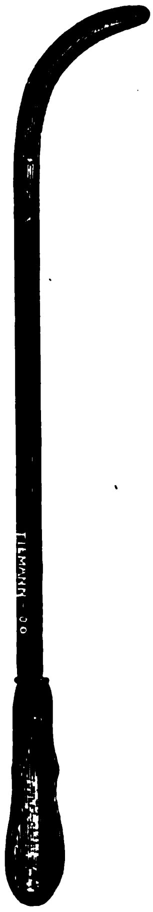


FIG. 53. Van Buren's Cupped Sound.

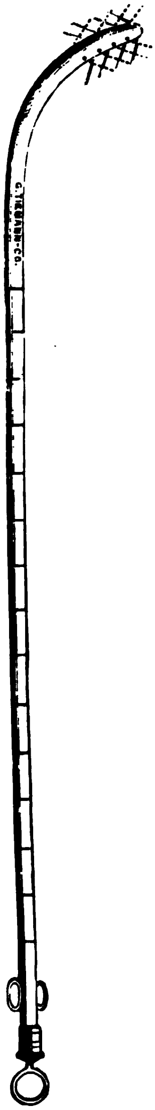


FIG. 54. Dick's Caustic Syringe.

URETHRAL INSTRUMENTS.

URETHRAL SYRINGES.

FIG. 55. Buttle's Gonorrhœa Syringe.

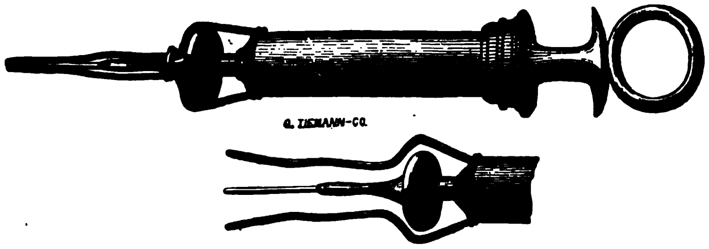


FIG. 56. Otis' Syringe Nozzle.

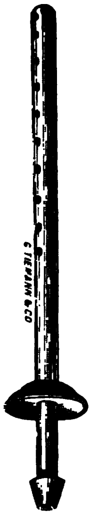


FIG. 57. Taylor's Modification of Bumstead's Syringe.

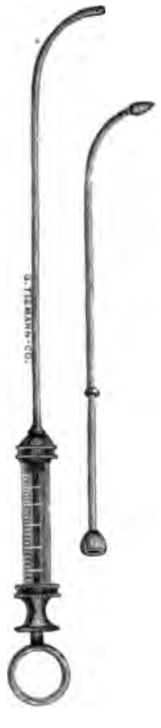


FIG. 58. Otis' Dilating Catheter and Syringe.

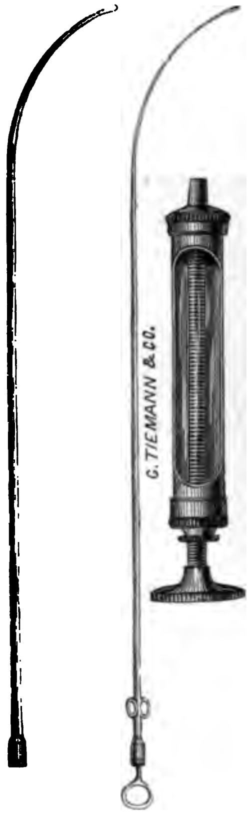


FIG. 59. Wheelock's Reverse-Flow Syringe.

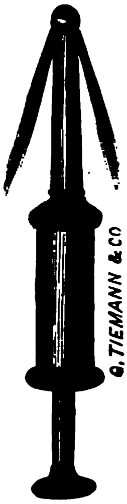


FIG. 60. Bumstead's P. P. Syringe.

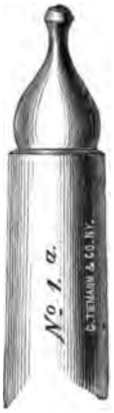


FIG. 61. Parker's Catheter Syringe.

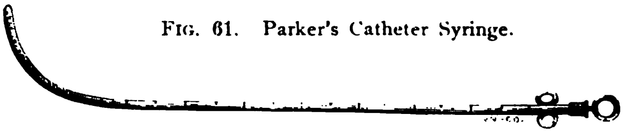


FIG. 62. Sigismund's P. P. Syringe.

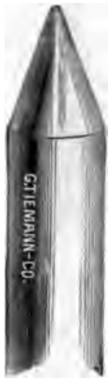
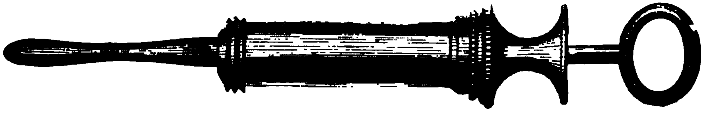


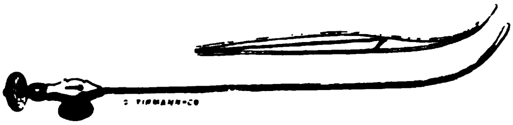
FIG. 63. Hard Rubber P. P. Syringe.



URETHRAL INSTRUMENTS.

STRICTURE DIVULSORS AND DILATORS.

FIG. 64. Thompson's Divulsor.



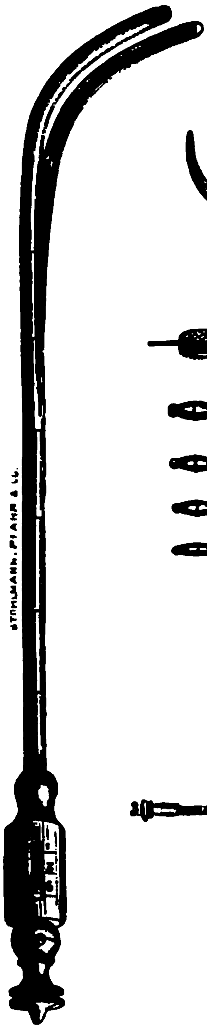


FIG. 71. Gouley's Instrument for Over-Distending the Urethra.

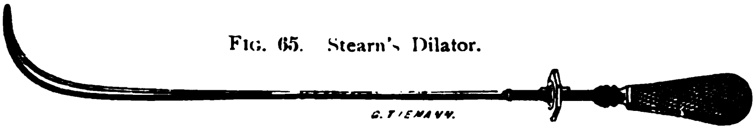


FIG. 65. Stearn's Dilator.

FIG. 66. Holt's Divulsors.

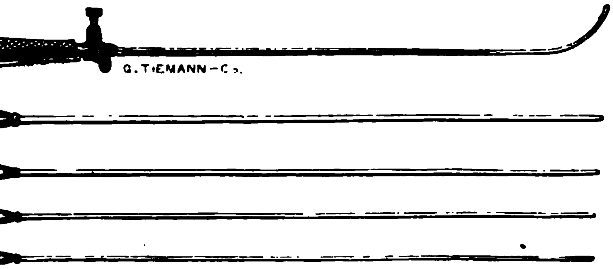


FIG. 67. Gouley's Divulsor.

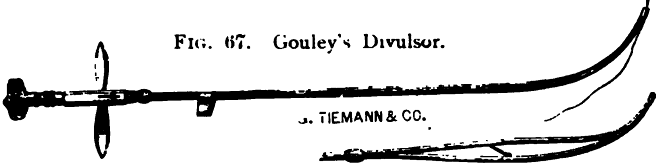


FIG. 68. Minor's Dilators.

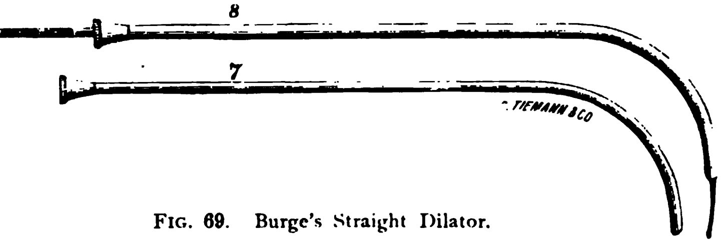


FIG. 69. Burge's Straight Dilator.

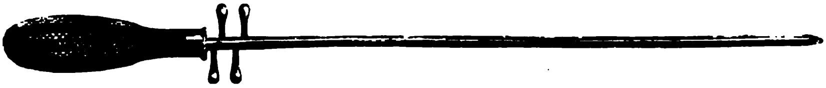
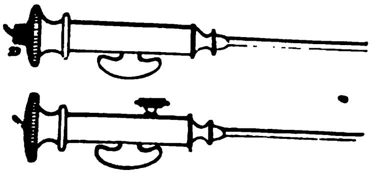
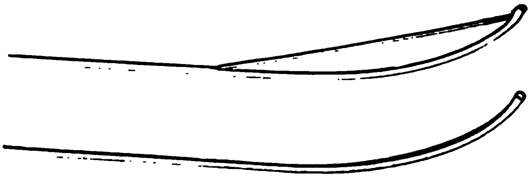


FIG. 70. Corradi's Dilator.

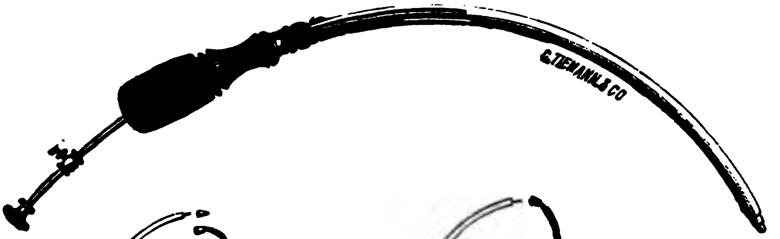




URETHRAL INSTRUMENTS.

STRICTURE DIVULSORS AND DILATORS.

FIG. 72. Burge's Curved Stricture Dilator.



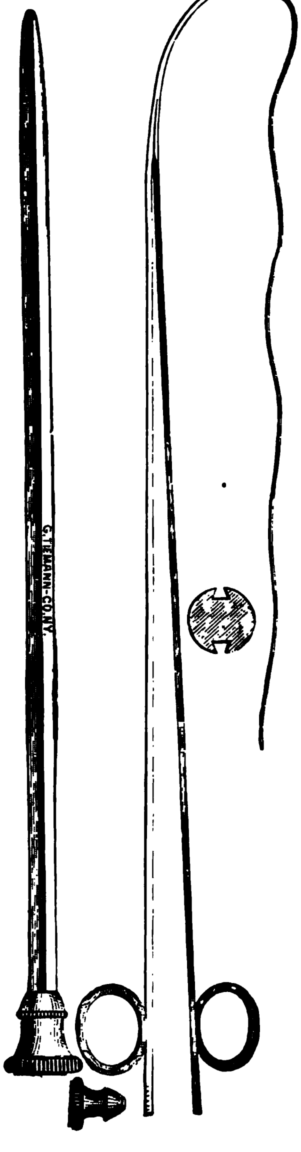


FIG. 73. Voillemiér's Stricture Dilator.

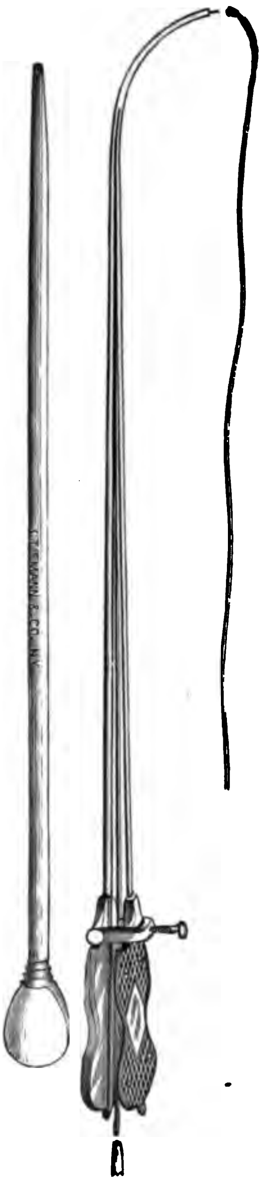


FIG. 74. Holt's Dilator, modified by Bumstead.

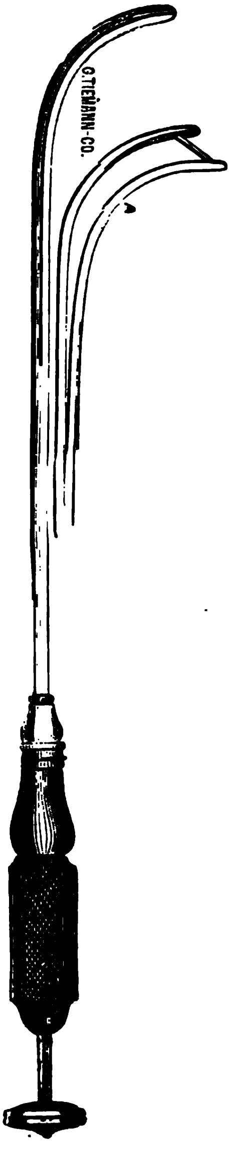


FIG. 75. Thebeaud's Stricture Dilator.

See also Steel Sounds, figs. 15, 16, etc.

URETHRAL INSTRUMENTS.

INTERNAL URETHROTOMY INSTRUMENTS.

FIG. 76. Civiale's Bistoury Caché.

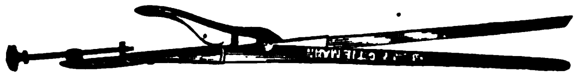


FIG. 77 Gouley's Tunnelled Urethrotome.

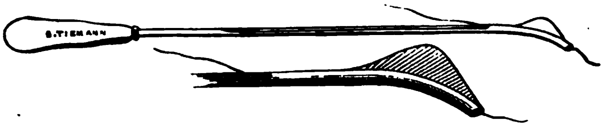


FIG. 78. Peter's Urethrotome.

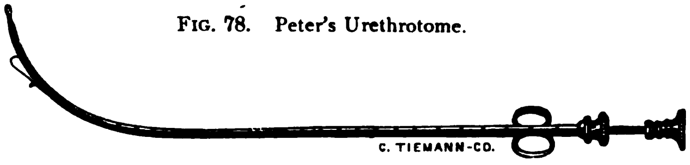


FIG. 79 Mastin's Maisonneuves Urethrotome.

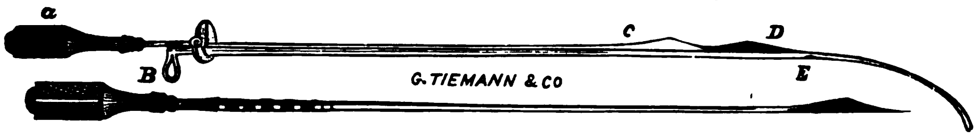


FIG. 80. Gross' Urethrotome.

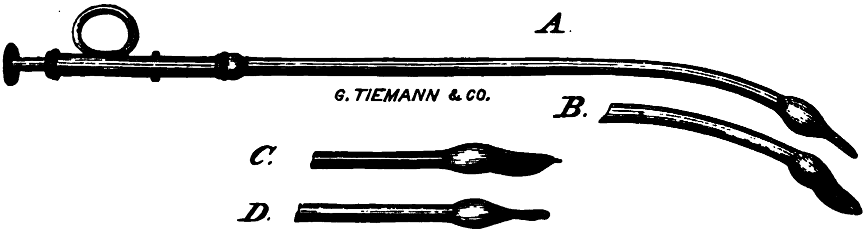


FIG. 81. Otis' Dilating Urethrotome, No. 1.

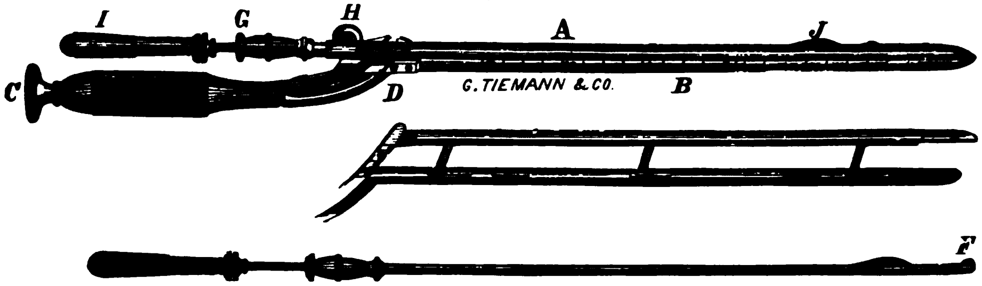
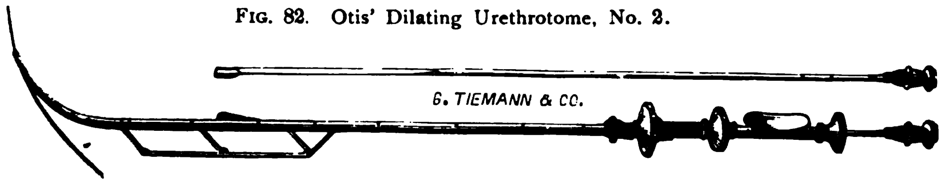


FIG. 82. Otis' Dilating Urethrotome, No. 2.



URETHRAL INSTRUMENTS.

INTERNAL URETHROTOMY INSTRUMENTS.

FIG. 83. Voillemiér's Urethotome.

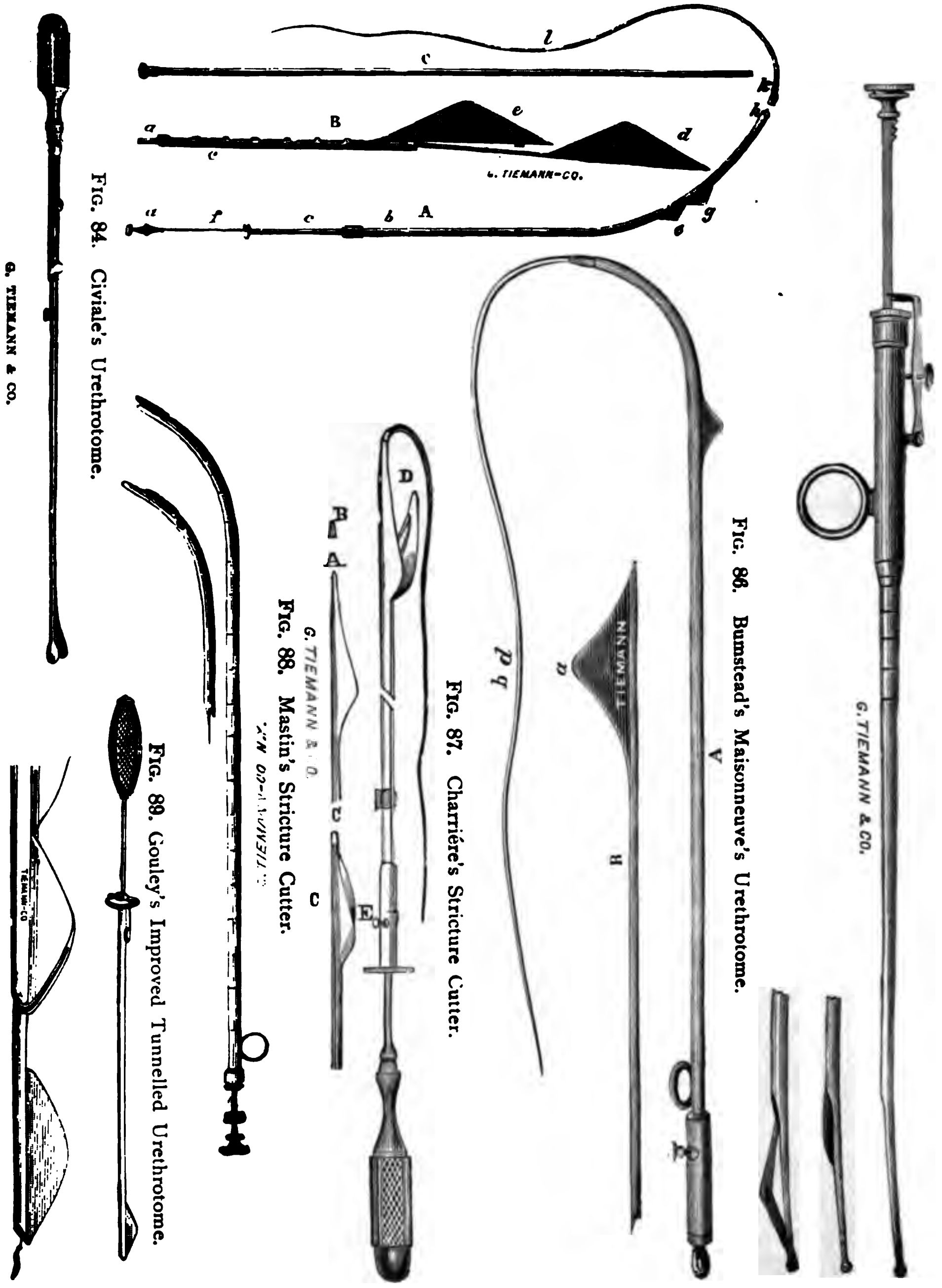


FIG. 84. Civiale's Urethrotome.

FIG. 85. Trelat's Urethrotome.

FIG. 86. Bumstead's Maisonneuve's Urethrotome.

FIG. 87. Charriére's Stricture Cutter.

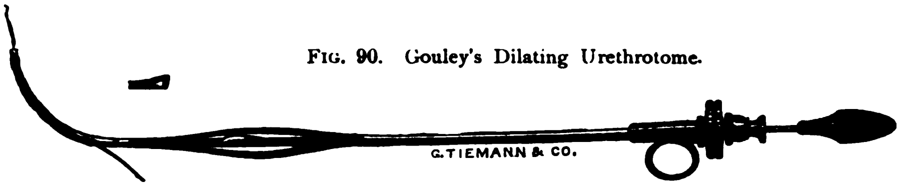
FIG. 88. Mastin's Stricture Cutter.

FIG. 89. Gouley's Improved Tunnelled Urethrotome.

URETHRAL INSTRUMENTS.

INTERNAL URETHROTOMY INSTRUMENTS.

FIG. 90. Gouley's Dilating Urethrotome.



IG. 93. Otis' Dilating Urethrotome, No. 8.

FIG. 91. Geo. K. Smith's Urethrotome.

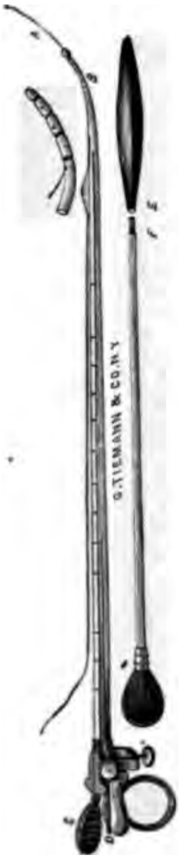
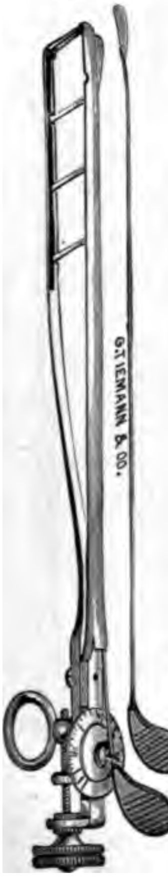


FIG. 92. Otis' Dilating Urethrotome, No. 4.



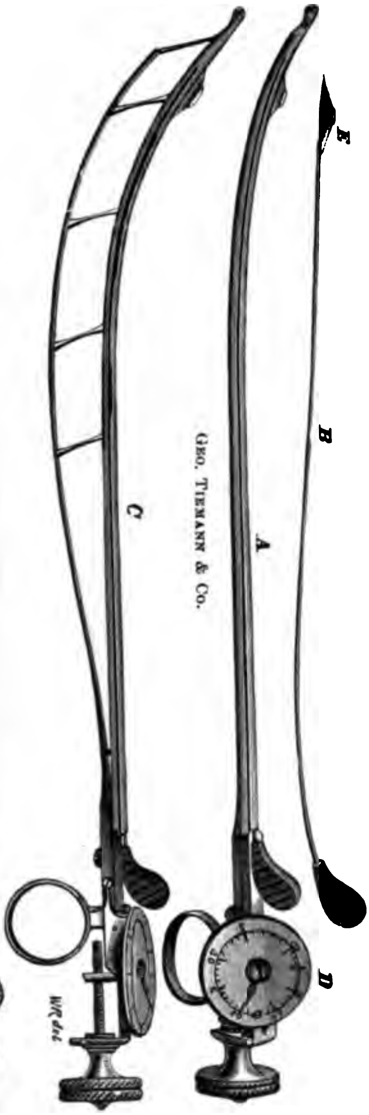


FIG. 94. Otis' Urethrameter.

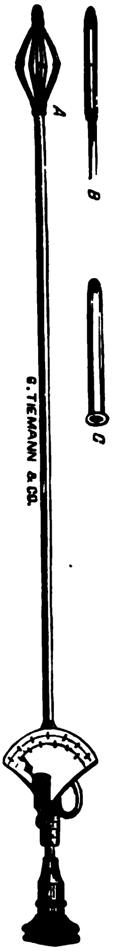
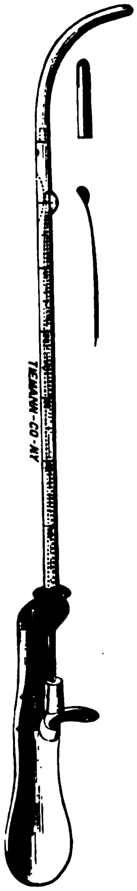


FIG. 95. Bumstead's Urethrotome.



URETHRAL INSTRUMENTS.

INTERNAL AND EXTERNAL URETHROTOMY INSTRUMENTS.

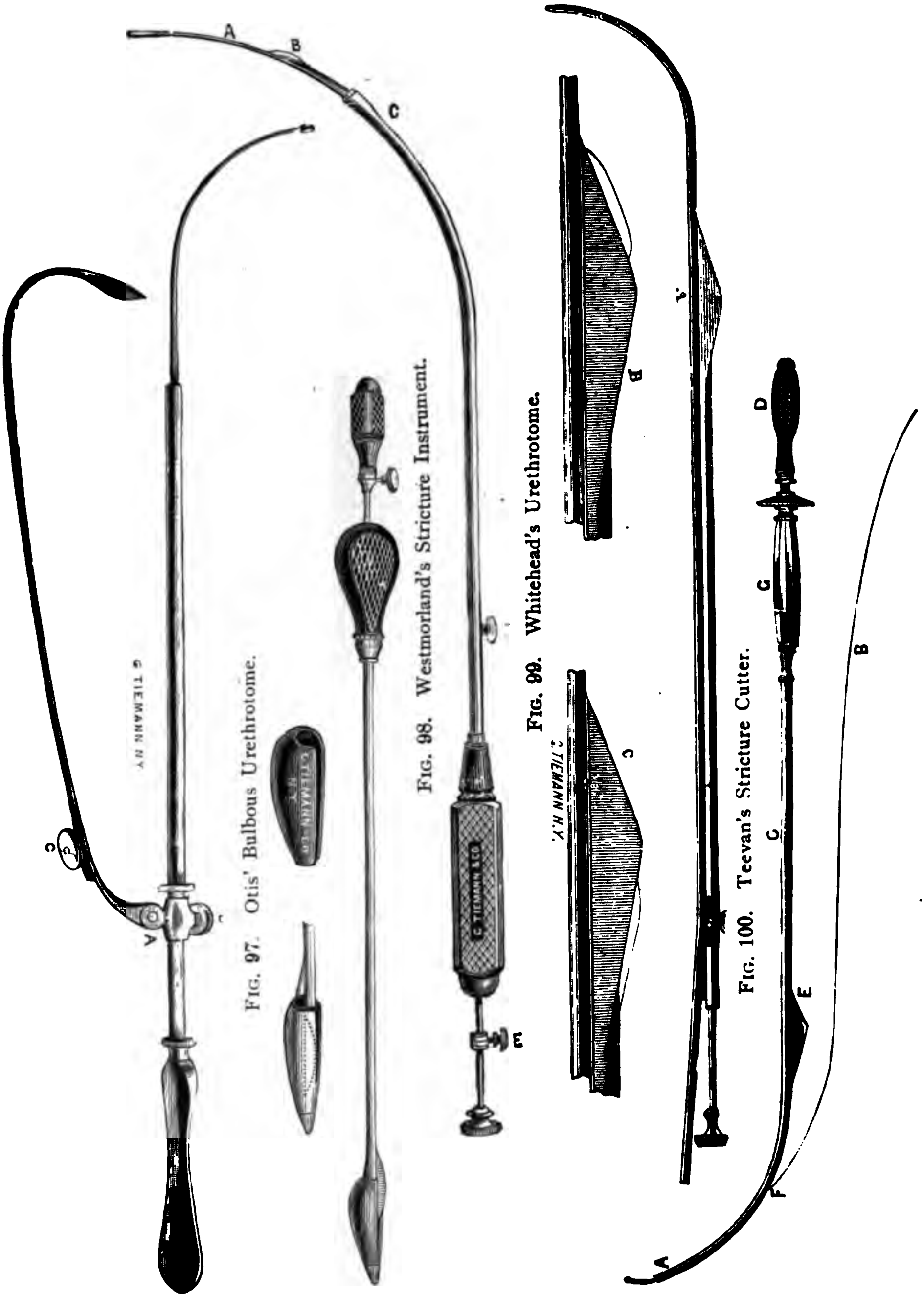


FIG. 96. Whitehead's Staff and Knife.

FIG. 97. Otis' Bulbous Urethrotome.

FIG. 98. Westmorland's Stricture Instrument.

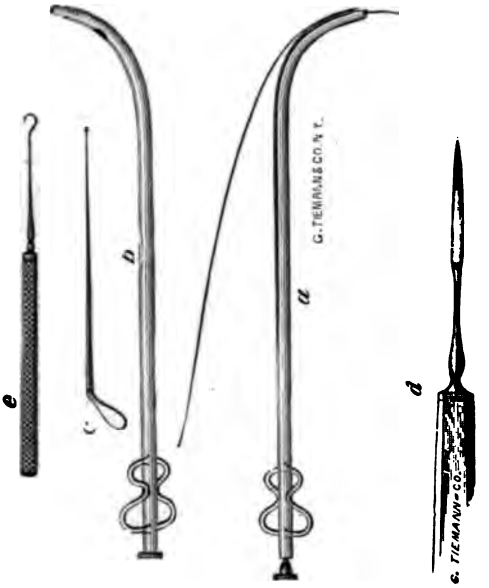
FIG. 99. Whitehead's Urethrotome.

FIG. 100. Teevan's Stricture Cutter.

URETHRAL INSTRUMENTS.

EXTERNAL URETHROTOMY INSTRUMENTS.

FIG. 101 (*a, b, c, d, e.*) Gouley's Instruments.



The capillary probe-pointed whalebone Bougie (A) is introduced into the urethra. If it enters a false passage, it is retained *in situ* by the left hand, while another is passed by its side. If this second guide makes its way into the false passage, it is to be treated precisely as was the first, and the operation repeated till one guide can be made to pass the obstruction and enter the bladder. The next step is to introduce a No. 8 grooved metallic catheter (B), with a quarter of an inch of its extremity bridged over so as to convert the groove into a canal, the bridged portion itself being also grooved, the operator, feels for and opens the canal upon this groove. A loop of silk is then passed through each edge of the incised urethra, the catheter is withdrawn a little, so as to bring into view the black guide ; then the stricture, with about half an inch of the uncontracted canal behind it, is divided. This is best accomplished by means of the small, narrow, beaked, straight bistoury (D). Arnott's grooved probe (C), may be used as a guide for the incision. (E) is a Tenaculum, useful in the operation ; a full description of the operation will be furnished on application.

FIG. 102. Hewitt's Staff and Knife.

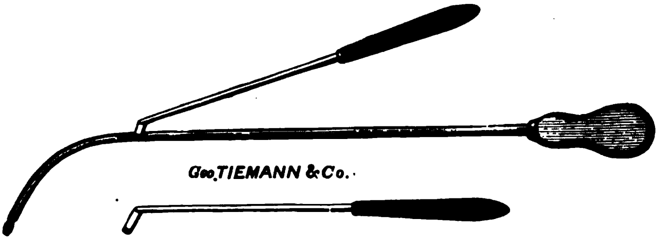


FIG. 103. Syme's Staff.

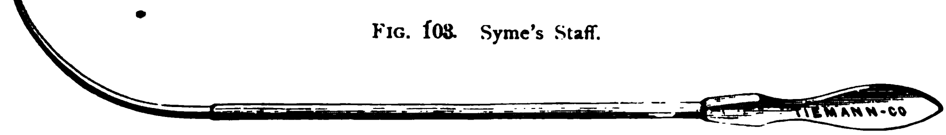
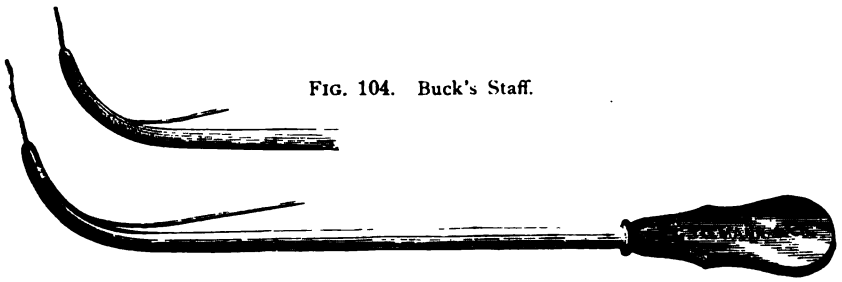


FIG. 104. Buck's Staff.

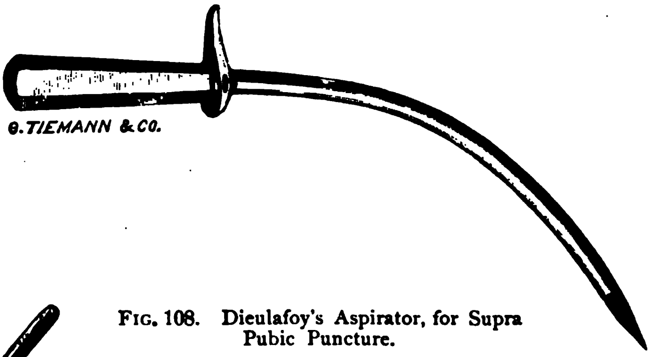


URETHRAL INSTRUMENTS.

INSTRUMENTS FOR TAPPING THE BLADDER.

FOR RECTAL PUNCTURE.

FIG. 105. Rectum Trocar.



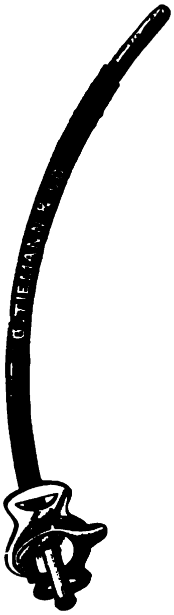
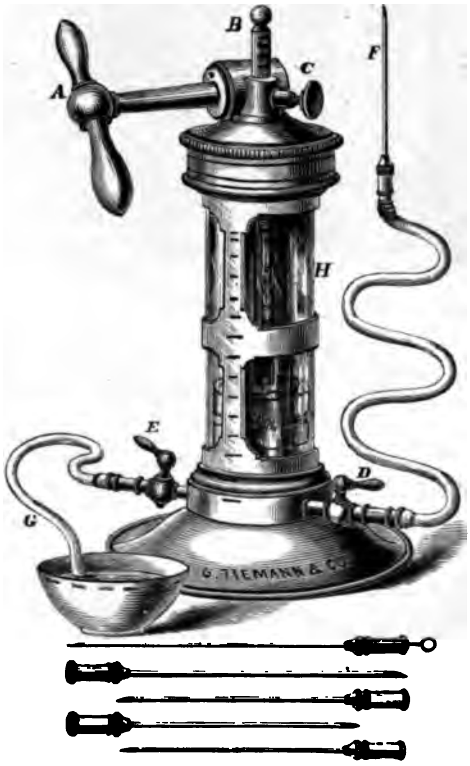


FIG. 107. Van Buren's Double Silver Tube.

FIG. 108. Dieulafoy's Aspirator, for Supra Pubic Puncture.



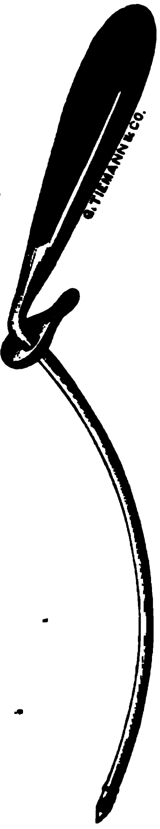


FIG. 106. Buck's Rectum Trocar.

A descriptive pamphlet on Aspirators may be had on application. Other forms of Aspirators, see page 131, Part I.

URETHRAL INSTRUMENTS.

INSTRUMENTS FOR STONE IN THE BLADDER

SEARCHERS.

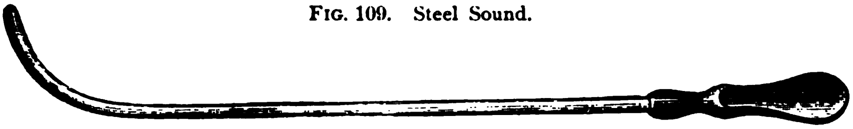


FIG. 109. Steel Sound.

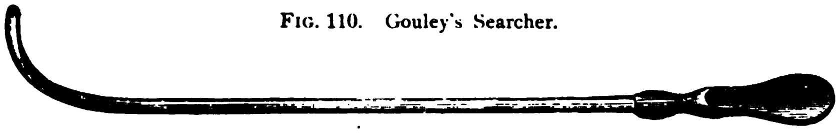
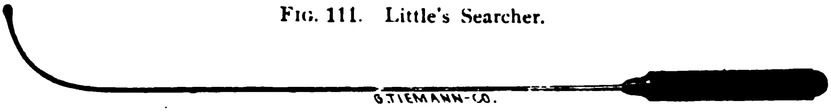
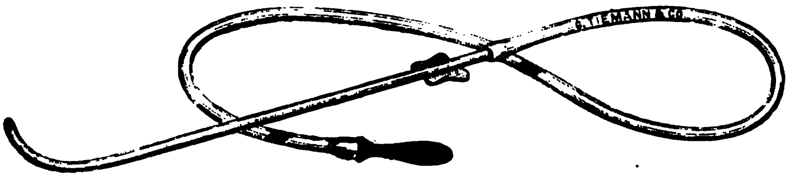


FIG. 110. Gouley's Searcher.


G.TIEMANN-CO.
FIG. 111. Little's Searcher.


G. TIEMANN & CO.
FIG. 112. Andrew's Searcher.

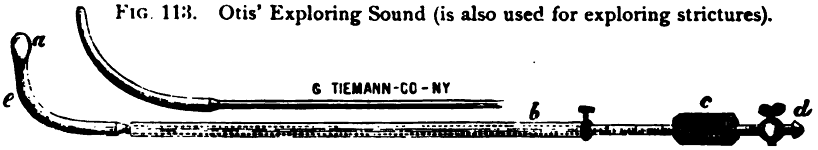


FIG. 113. Otis' Exploring Sound (is also used for exploring strictures).

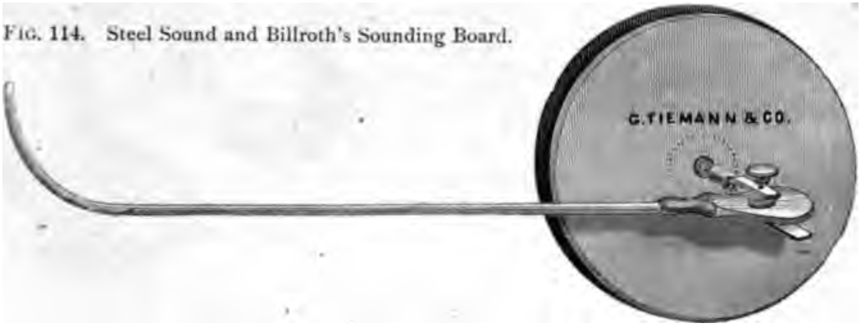
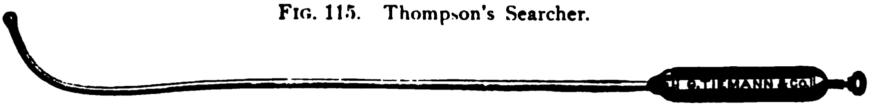


FIG. 114. Steel Sound and Billroth's Sounding Board.


G. TIEMANN & CO.
FIG. 115. Thompson's Searcher.

URETHRAL INSTRUMENTS.

INSTRUMENTS FOR STONE IN THE BLADDER

ON THE CONSTRUCTION OF MODERN LITHOTRITES.

The articulated Lithotrite of *Jacobson*, (fig. 125, A, B,) superseded the Trilabe of *Hunter*, (fig. 124.)

Weiss introduced the curved instrument with jaws to open and shut, and *Heurteloup* so modified it, (fig. 122) that percussion, by means of a hammer applied to the extremity of the male blade, causes fragmentation of the stone. This instrument has been gradually superseded by the varieties in use at the present time, i.e.: those worked by *lever power*, either with rack and pinion, or screw. *Sir Wm. Fergusson's* instrument, (fig. 123) is worked by rack and pinion. Its crushing power is regulated by the strength of the operator's hand, and may be increased by exercising a certain jerking impulse, resembling that of the percussion hammer, or by using the hammer itself. The greater efficiency of the *screw* as a power, and the ease and smoothness with which it acts, have led to its very general adoption for Lithotrites Civiales, (fig. 129) Thompson's (fig. 127) and Teevan's (fig. 128) instruments are worked in this way. The motive power of these instruments resides in the handles and may be applied or detached at will, so that the male blade can be withdrawn to the required extent, and then brought into connection with the screw, by simply sliding the button on the handle of Thompson's instrument, (fig. 117) or by moving the vertical slide J, on the handle of Teevan's, (fig. 116). In *Civiale's* Lithotriptor the screw-power is thrown in and out of gear by a quarter turn of a movable disk attached to the handle of the female blade, (fig. 129.)

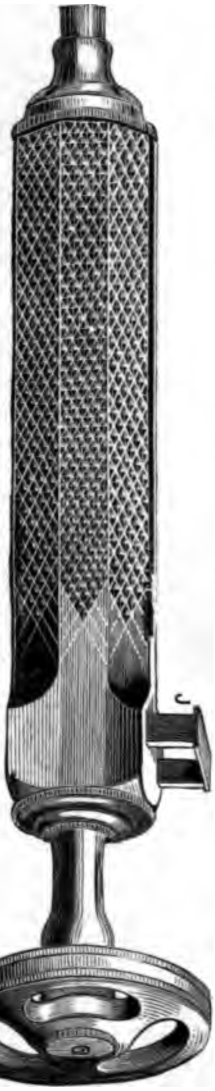
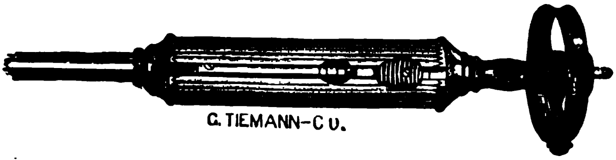


FIG. 116. Handle of Teevan's Lithotriptor.

FIG. 117. Handle of Thompson's Lithotrite.


G. TIEMANN-C O.

Considering a Lithotrite as composed of parts, we speak of the *female blade* and the *male blade*. The *female blade* is the one continuous and fixed to the handle (fig. 118), it is deeply grooved for the reception of the *male blade* or sliding rod, (fig. 119.)

FIG. 118. Female Blade of Thompson's Lithotrite.

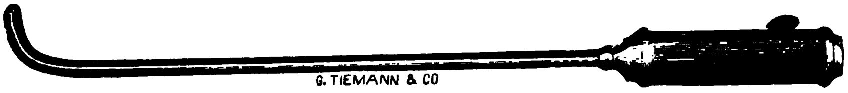
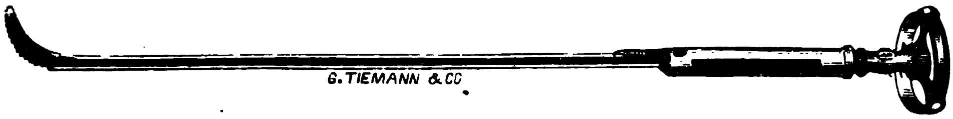
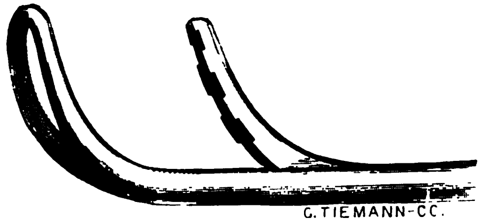


FIG. 119. Male Blade of Thompson's Lithotrite.



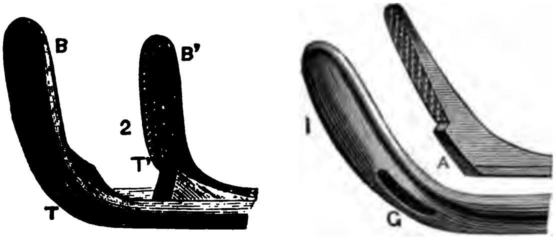
When the male blade is pushed home as far as it will go, we say the Lithotrite is closed—and then call the curved extremity *the beak*, the other, by which we take hold of the instrument, the handle, (figs. 116, 117,) and the part between handle and beak *the shaft*. When the male blade is drawn out, the beak separates, or opens, and we now speak of the halves as *jaws*, (figs. 120, 121).

FIG. 120. Fenestrated Jaws of (Thompson's) Lithotrite.



The jaws of Lithotriptors vary in strength and structure, in accordance with the work required of them. For reducing stones, of large size and considerable hardness, to fragments, the male blade is narrow, with deep and sharp angular teeth, while the female blade is broad, heavy and fenestrated, (fig. 120). In closing the jaws, fragments and detritus are forced through this fenestrum, so that no clogging or impaction can take place.

FIG. 121. Closed Jaws of Lithrotrite.



For crushing small or soft calculi, or for pulverizing fragments, the jaws of the Lithotriptor are shorter, less heavy and their opposing surfaces are simply roughened, so that detritus produced may pass off with the urine.

Mercier has made valuable improvements in the jaws of Lithotriptors, in fig. 121 will be observed a slit at the base of the female blade T, through which accumulated detritus is ejected by means of a ploughshare or spur T, which, at the same time, adds enormously to the strength of the instrument. This spur fits into the eye of the female blade, so that if the finger be passed over the hole when the blades are closed, no inequality will be felt. The spur is also made as seen in fig. 1A, which may be regarded as a model instrument. It is not easy to exaggerate the value of the spur T, for it enables us to use a very slender instrument in cases where it would otherwise not have been safe, and thus extends lithotrity to a field from whence it was previously excluded, for there are many patients whose urinary tract is in such a state of irritation that repeated manipulations with heavy lithotrites could not be borne.

URETHRAL INSTRUMENTS.

INSTRUMENTS FOR STONE IN THE BLADDER.

LITHOTRITES.

FIG. 122. Heurteloup's Lithotrite and Mallet.

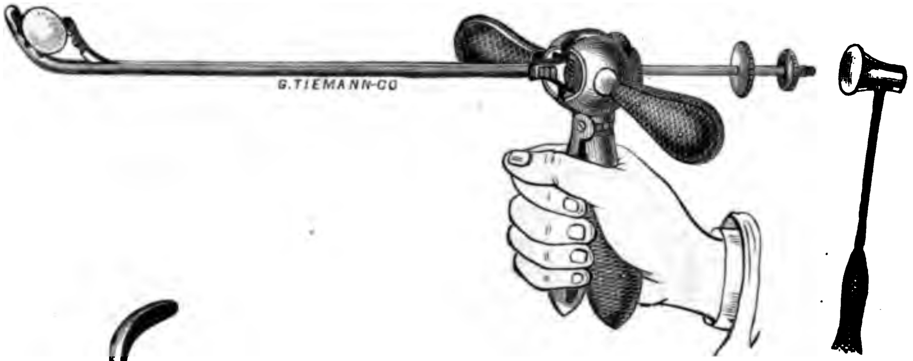


FIG. 123. Fergusson's Lithotrite.

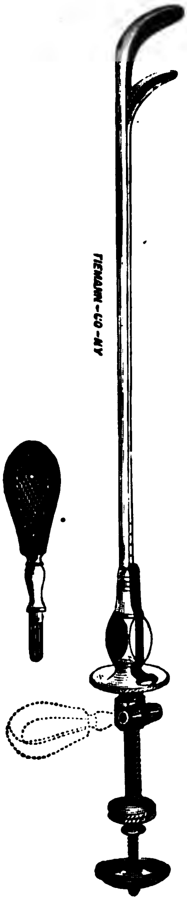


FIG. 124. Hunter's Trilabe.

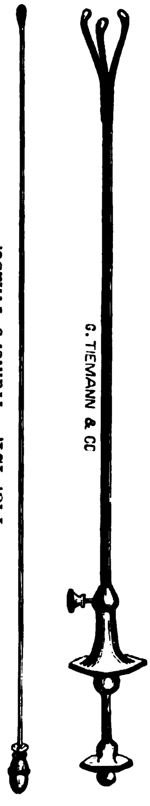


FIG. 125 (*a*). Jacobson's Lithotrite (closed).

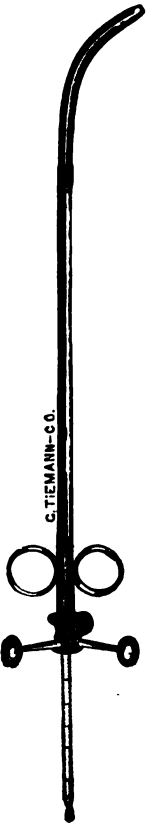


FIG. 125 (*b*). Jacobson's Lithotrite (open).

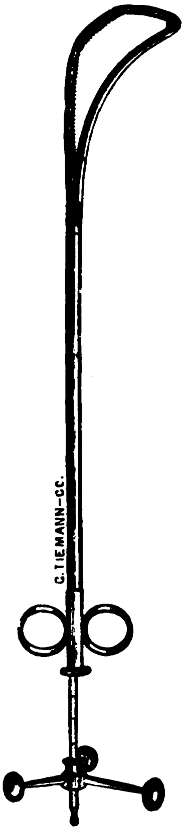
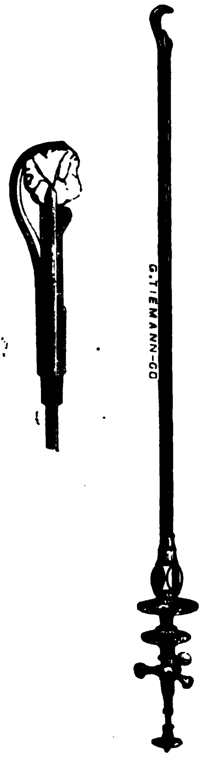


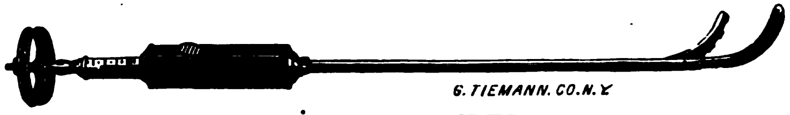
FIG. 126. Reliquet's Urethral Lithrotrite.



URETHRAL INSTRUMENTS.

INSTRUMENTS FOR STONE IN THE BLADDER.

FIG. 127. Thompson's Lithotrite.



Our Lithotrites are *forged* out of the best English steel. The groove in the female blade is cut with a machine made for this special purpose. When finished, they are *tested*, by breaking with them pieces of soft grindstones. We should advise surgeons to test their instruments in this manner, before attempting to use them in the bladder; it will exercise their tact and judgment. When a stone is between the jaws of a lithotrite and the screw turned, the operator will distinctly recognize a certain recoil and spring of the instrument before the stone is crushed. This sensation requires to be studied, in order to know how far the instrument may be taxed (when used unassisted by eyesight), on a bladder calculus.

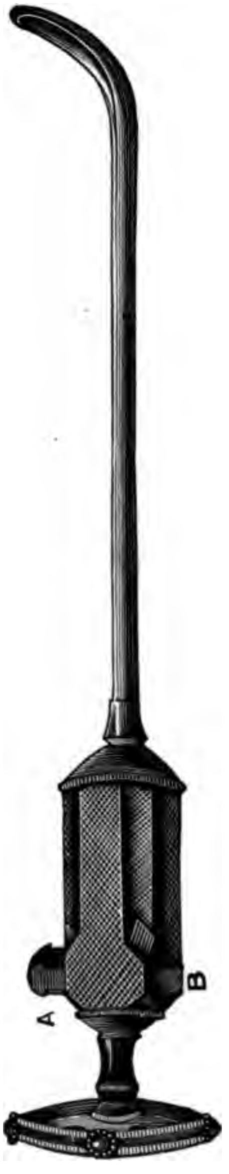


FIG. 128. Teevan's Lithotrite.

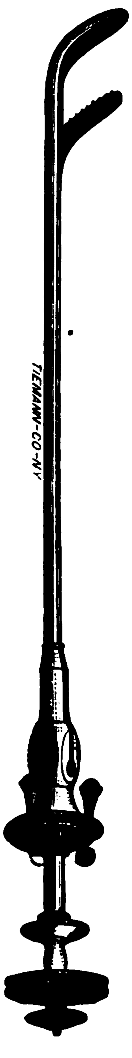


FIG. 129. Civiale's Lithotriptor.

URETHRAL INSTRUMENTS.

INSTRUMENTS FOR STONE IN THE BLADDER.

LITHOLAPAXY.

RAPID LITHOTRITY WITH EVACUATION.

By HENRY J. BIGELOW, M. D.

The following are the chief points connected with the modification in lithotrity which I have described, and for which I propose the above name.

1. The calculus, although not necessarily pulverized, is crushed as rapidly and completely as is practicable. The dust and fragments are immediately evacuated, and a serious source of irritation is thus removed.

2. This can be generally effected in a single operation.

3. The operation — performed of course under ether — may be, if necessary, of one or two hours' duration, or even longer.

4. The method applies to larger stones than have been hitherto considered to lie within the province of the lithotritist. It also applies to small stones, nuclei, phosphatic deposits, and foreign substances.

5. Evacuation is best accomplished by a large tube, preferably straight with a distal orifice, the extremity of which is shaped to facilitate its introduction, and, during suction, to repel the bladder wall — and by an elastic exhausting bulb, which acts partly as a siphon. Below the latter is a glass receptacle for debris.

6. The best size for the tube is the largest the urethra will admit.

7. Such a tube is usually introduced with facility, if passed vertically as far as it will go toward the anus before changing its direction, and afterward directed almost horizontally, and passed by rotation through the triangular ligament. The first part of this rule applies also to the introduction of a lithotrite, and even a curved catheter. A free injection of oil is important.

8. A small meatus should be enlarged, or a stricture divulsed, to allow the passage of a large tube.

9. If the bladder be not small, a large and powerful lithotrite is always better than a small one.

10. That this may have room for action, the escaping water should be replaced occasionally, through a tube inserted a few inches into the urethra by the side of the lithotrite. But the bladder should not be over distended.

11. To save time, and also to prevent undue dilatation of the vesical neck, a non-impacting lithotrite is desirable. The jaws of a non-fenestrated instrument will not impact, if the male blade is furnished with alternate triangular notches by which the debris is discharged laterally, and also with a long thin spur at

the heel fitted to a corresponding slot in the female blade,—provided the floor of the female blade, especially at the heel, be made nearly on a level with its rim. To repel the bladder, the female blade should be longer and a little wider than is usual. It should have also low sides easily accessible to fragments,—relying for strength less upon these than upon a central ridge below the heel. In the male blade of such a lithotrite the apices of the triangles should be a little blunted. Lastly, a non-fenestrated female blade protects the floor of the bladder, during a long sitting. A fenestrated instrument directs sharp splinters against it. The latter also delays the process of disintegration, by delivering through its opening the same fragments many times.

12. In locking and unlocking a lithotrite repeatedly in a long operation, it takes less time and is easier to turn the right wrist, as in my instrument, than to displace the thumb of either hand in search of a button or a lever, as in previous instruments.

BOSTON, May 25th, 1878.

FIG. 129*b*. Bigelow's Lithotrite.

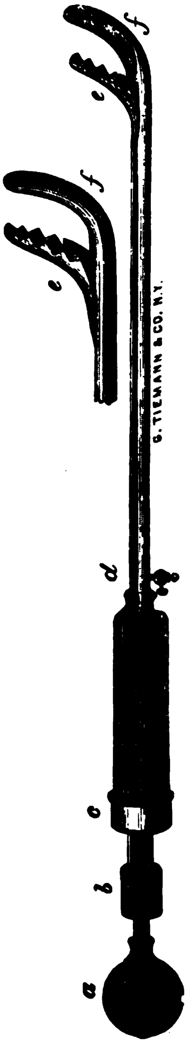


FIG. 129*d*. Bigelow's Evacuating Apparatus.

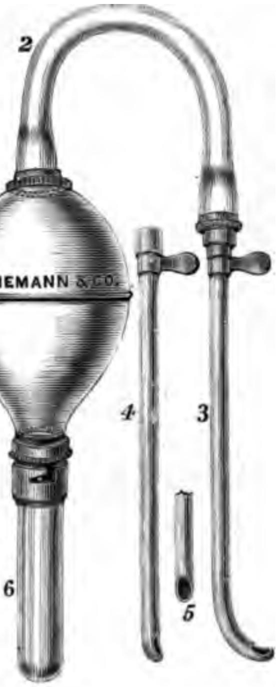
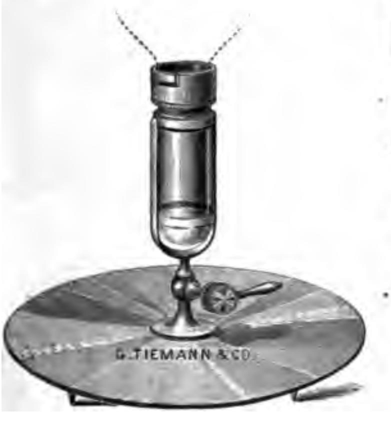


FIG. 129*c*. Stand for Bigelow's Evacuating Apparatus.



URETHRAL INSTRUMENTS.

INSTRUMENTS FOR STONE IN THE BLADDER.

LITHOTOMY.

FIG. 130. Pritchard's Anklets and Wristlets.

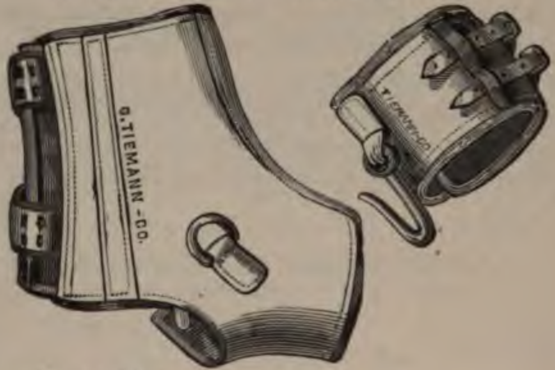

G.TIEMANN-CO.

FIG. 131. Little's Lithotomy Staff.

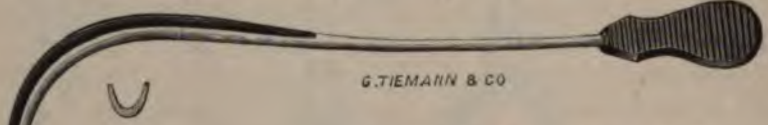


FIG. 132. Markœ's Lithotomy Staff.

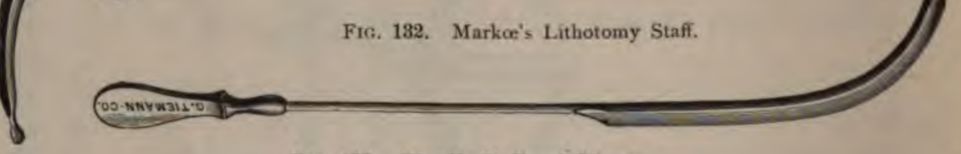

G.TIEMANN-CO.

FIG. 133. Wood's Staff and Bisector.

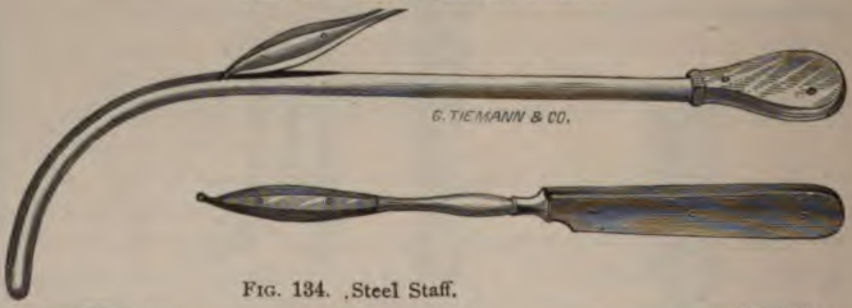

G.TIEMANN & CO.

FIG. 134. .Steel Staff.

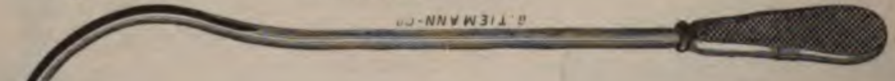
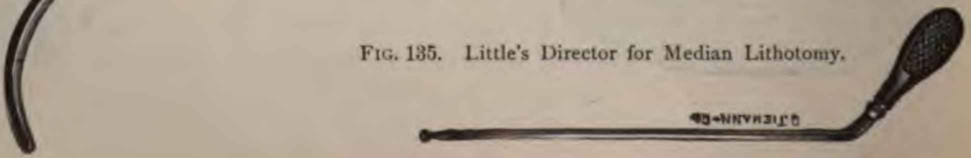


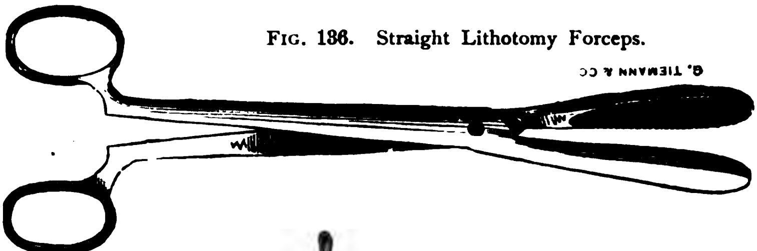
FIG. 135. Little's Director for Median Lithotomy.



URETHRAL INSTRUMENTS.

INSTRUMENTS FOR STONE IN THE BLADDER.

FIG. 136. Straight Lithotomy Forceps.



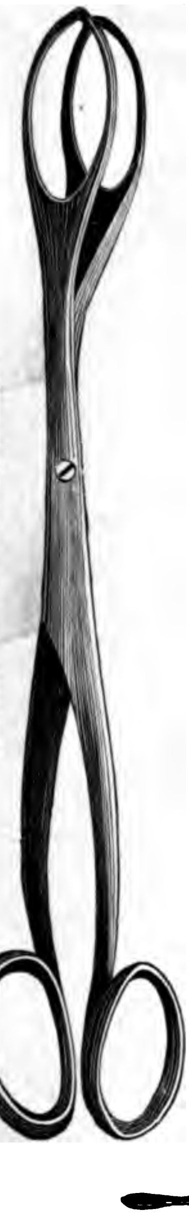


FIG. 137. Teevan's Lithotomy Forceps.

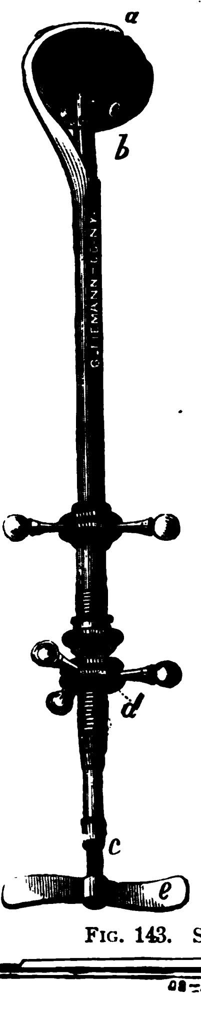


FIG. 138. Maisonneuve's Stone Crusher.

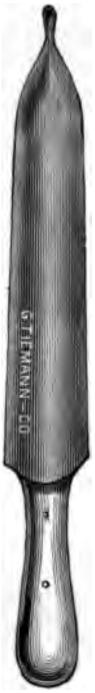


FIG. 139. Blunt Gorget.

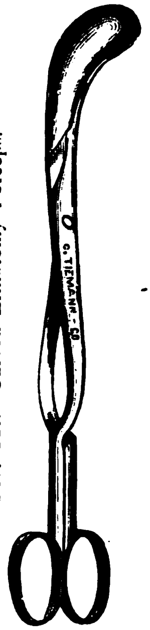


FIG. 140. Curved Lithotomy Forceps.

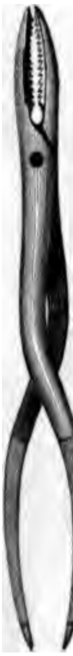


FIG. 141. Dolbeau's Lithoclast.

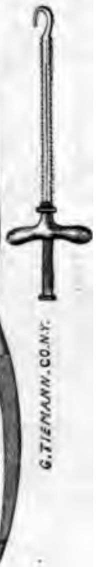

G. TIEMANN. CO. N.Y.

FIG. 142. Dolbeau's Guide for the Lithoclast.

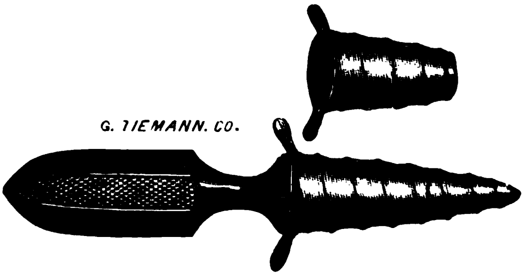
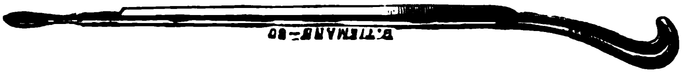

G. TIEMANN. CO.

FIG. 143. Scoop and Conductor.



URETHRAL INSTRUMENTS.

INSTRUMENTS FOR STONE IN THE BLADDER.

LITHOTOMY.

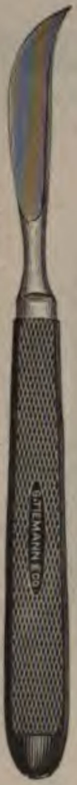
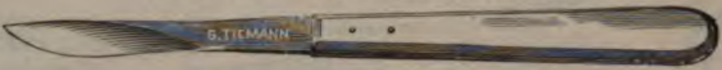


Fig. 144. Sharp-pointed Lithotomy Scalpel.

Fig. 146. Lithotomy Scalpel (Depuytren's).



(Gross' Lithotomy Knife is like fig. 147, but sharp-pointed.)

Fig. 147. Blizard's Probe-pointed Knife (American).

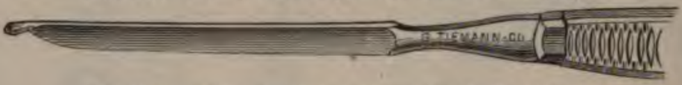


Fig. 148. Blizard's Probe-pointed Knife (English).

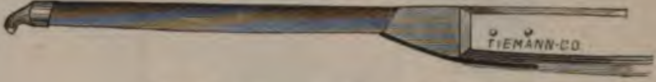


Fig. 149. Dowell's Gorget and Staff.

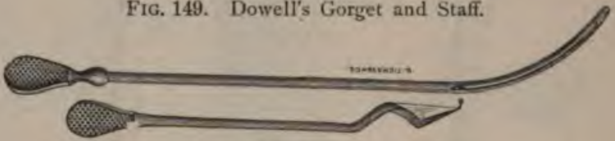


Fig. 149*b*. Little's Lithotomy Bistoury.

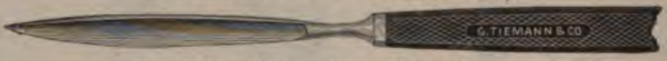


Fig. 149*c*. Nathan R. Smith's Lithotome.

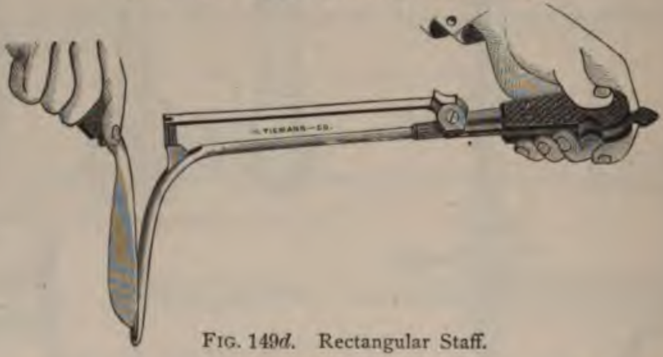
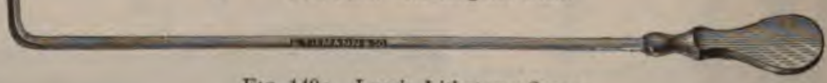


Fig. 149*d*. Rectangular Staff.



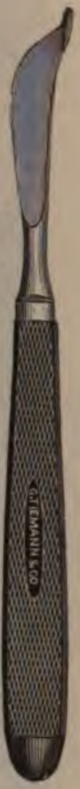
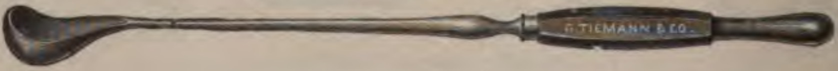


Fig. 145. Probe-pointed Lithotomy Scalpel.

Fig. 149*e*. Luer's Lithotomy Scoop.

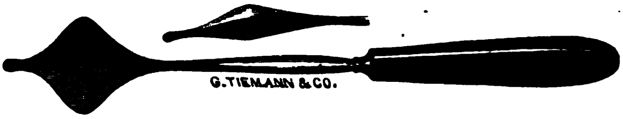


URETHRAL INSTRUMENTS.

INSTRUMENTS FOR STONE IN THE BLADDER.

LITHOTOMY.

FIG. 149*f*. Bush's Gorget.



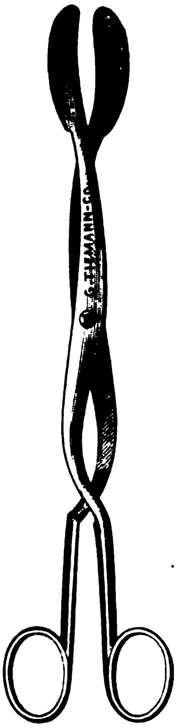


FIG. 149*g*. Lithotomy Forceps.

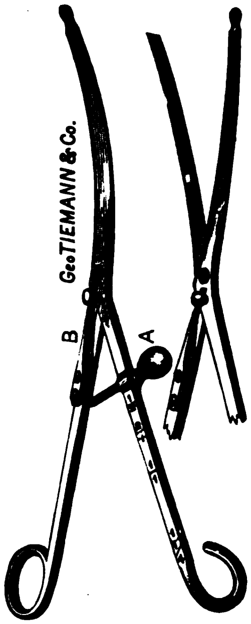


FIG. 150. Brigg's Lithotome.

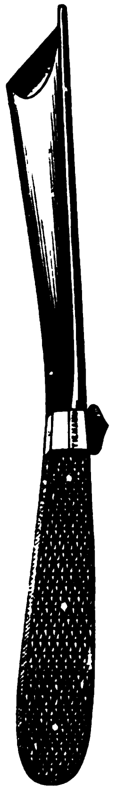


FIG. 150*b*. Physick's Gorget (two blades).

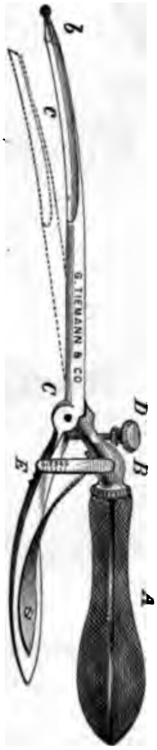
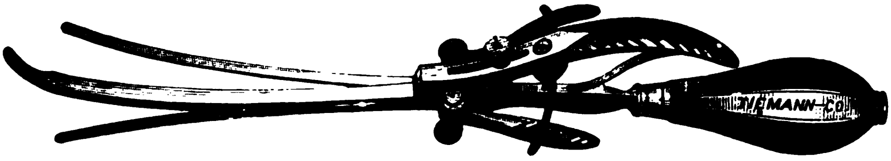


FIG. 150*c*. Hutchison's Lithotome.

FIG. 151. Depuytren's Double Bistoury Cache.



URETHRAL INSTRUMENTS.

INSTRUMENTS FOR STONE IN THE BLADDER.

SUPRA-PUBIC LITHOTOMY.

FIG. 152. Hooked Gorget.

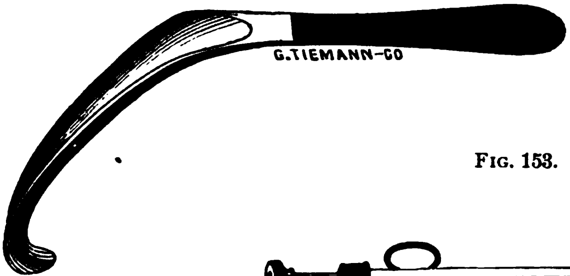


FIG. 153. Sonde à Dart.

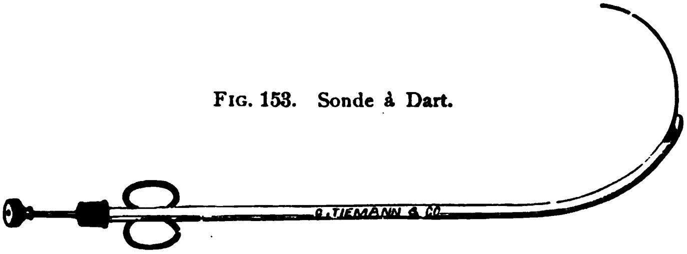


FIG. 154. Keith's Tenaculum.

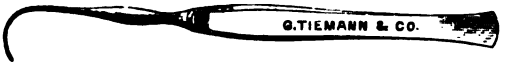


FIG. 155. Aponeurotome.

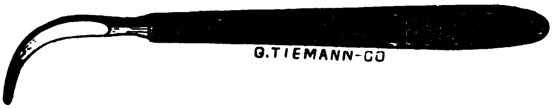


FIG. 156. Gross' Artery Compressor.

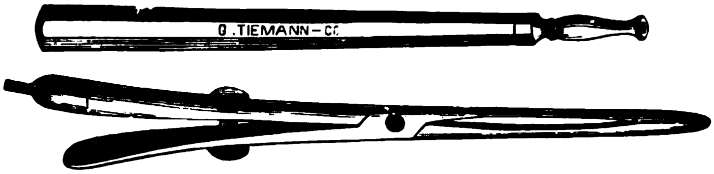
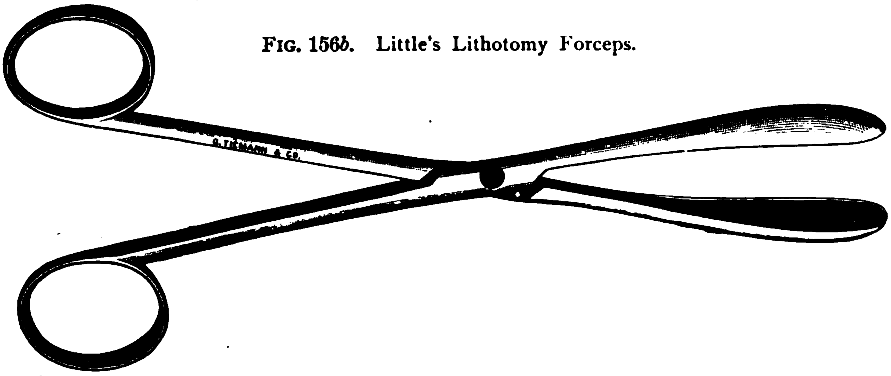


FIG. 156*b*. Little's Lithotomy Forceps.



URETHRAL INSTRUMENTS.

INSTRUMENTS FOR STONE IN THE BLADDER.

PERINEAL LITHOTRITY.

FIG. 157. Dolbeau's Dilator.

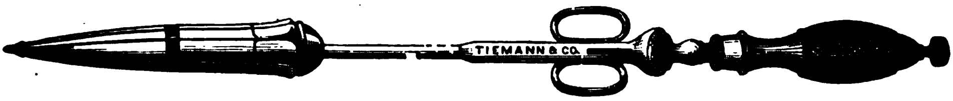


FIG. 157*b*. Guyon Duplay's Dilator.

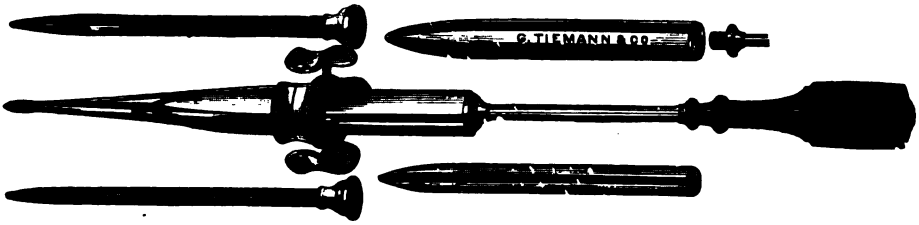


FIG. 157*c*. Gouley's Hydro-Hæmostat.
For arresting Hæmorrhage after Lithotomy.

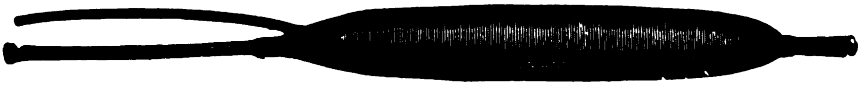


FIG. 158. Gouley's Lithoclasts (double lever).

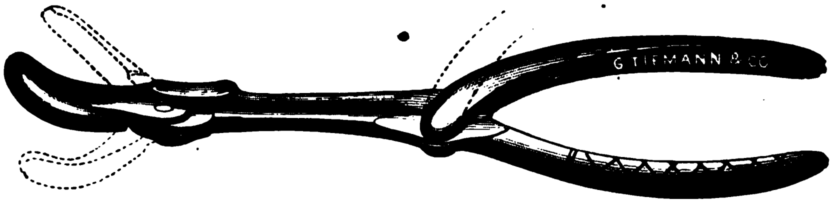
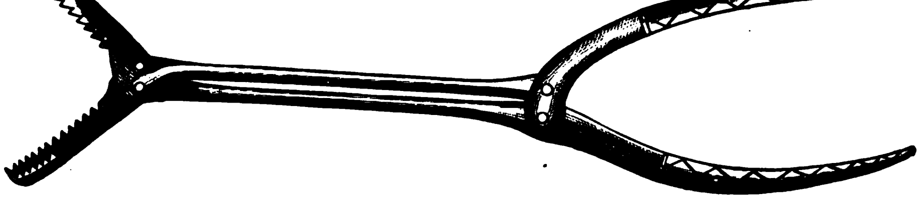


FIG. 158*b*. Gouley's Lithoclast (plain).



URETHRAL INSTRUMENTS.

INSTRUMENTS FOR STONE IN THE BLADDER.

Instruments for Clearing the Bladder of Débris.

FIG. 159. Nelaton's Evacuating Apparatus.

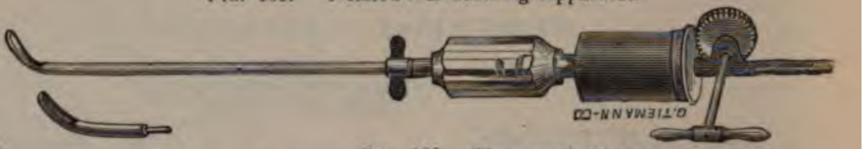


FIG. 160. Thompson's Measure.

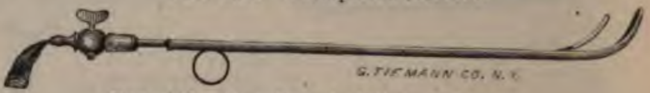
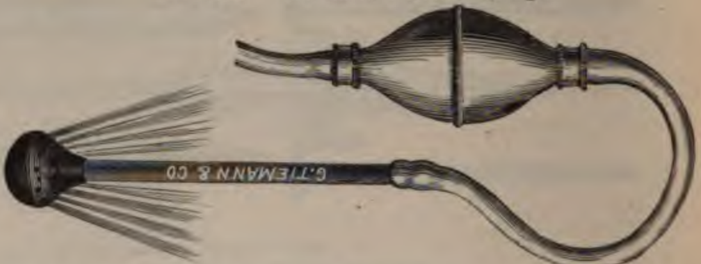


FIG. 161. Van Buren's Débris Syringe.



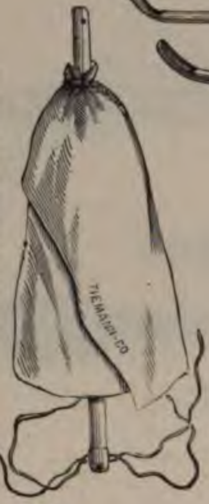


FIG. 162. Canula à Chemise

FIG. 163. Glover's Evacuating Apparatus.

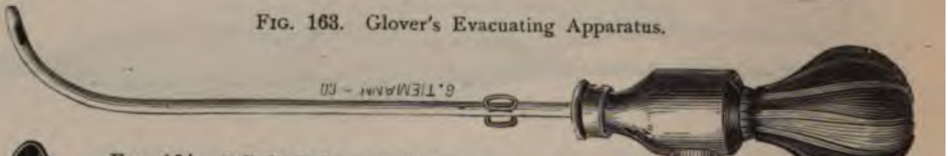


FIG. 164. Débris Tube and Obdurator.

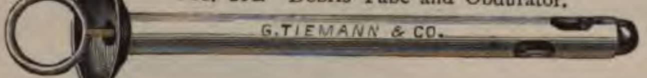


FIG. 165. Mason's Catheter Staff.

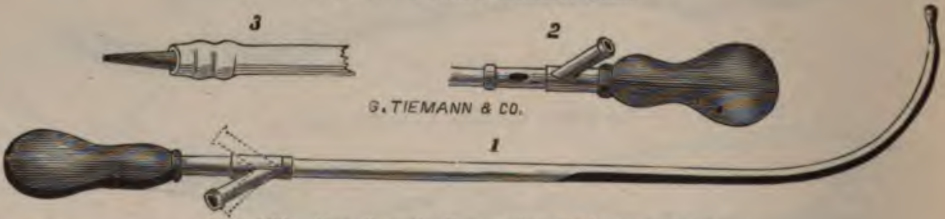
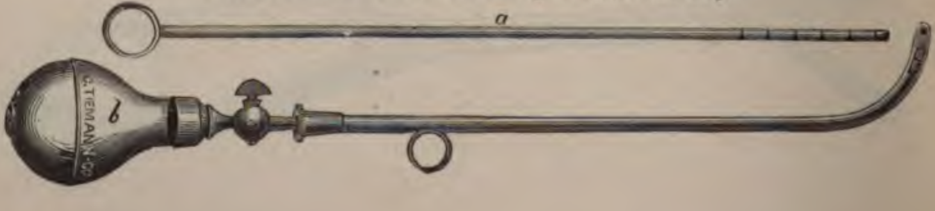


FIG. 166. Van Buren's Evacuating Catheter and Bag.



URETHRAL INSTRUMENTS.

Instruments for Clearing the Bladder of Débris and for Extracting Foreign Bodies from the Urethra.

FIG. 167. Double Current Catheter.

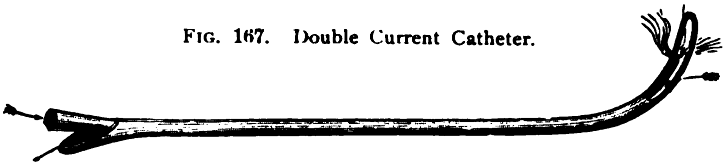


FIG. 168. Nott's Double Current Catheter.

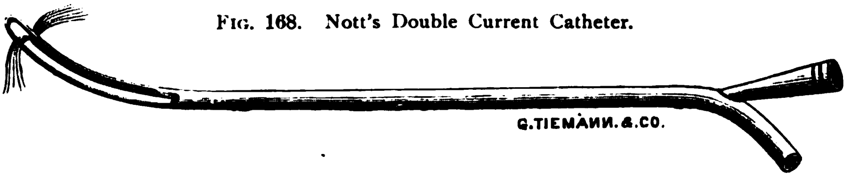


FIG. 169. Thompson's Urethral Forceps.

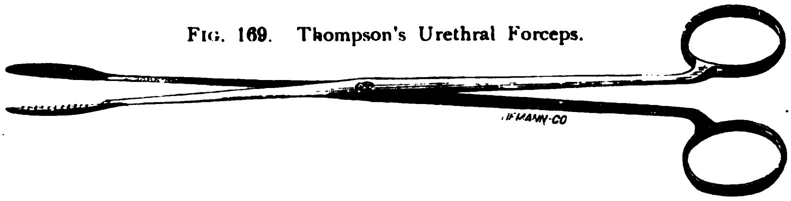


FIG. 170. Curved Urethral Forceps (Alligator).

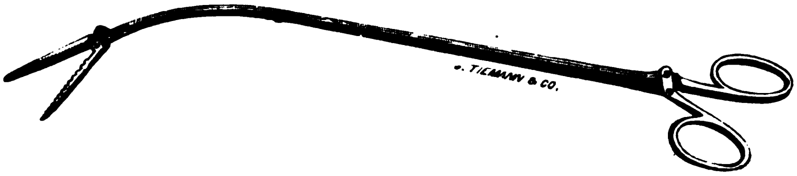


FIG. 171. Straight Urethral Forceps (Alligator).

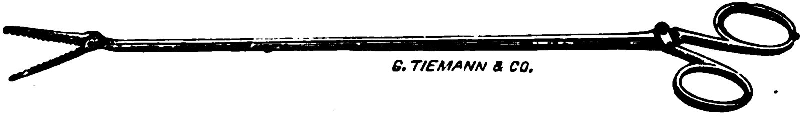


FIG. 172. Leroy d'Etiolles Urethral Scoop.

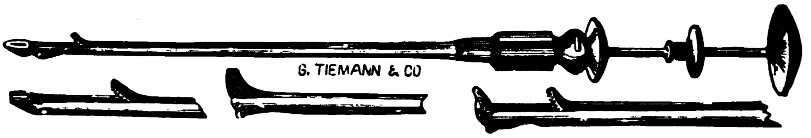
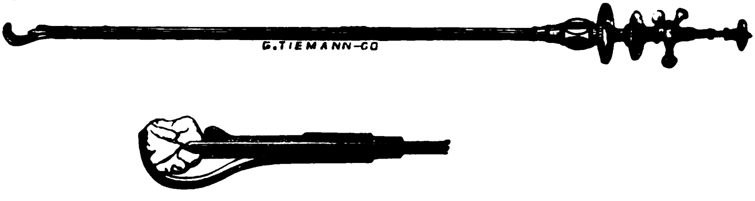


FIG. 173. Reliquet's Urethral Stone Crusher.



URETHRAL INSTRUMENTS.

SCROTAL INSTRUMENTS.

Fig. 174. Henry's Depilating Forceps.

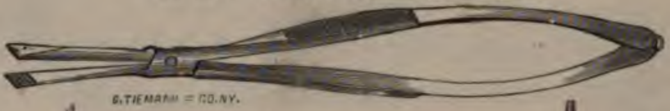

G.TIEMANN & CO.NY.

Fig. 175. Lewis' Varicocele Clamps.

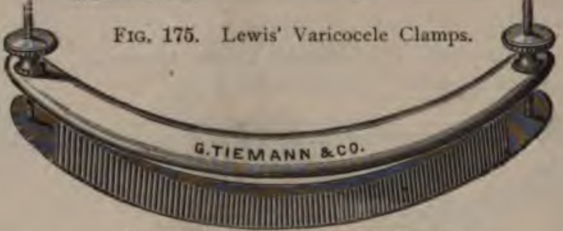

G.TIEMANN &CO.

Fig. 176. Henry's Scrotal Clamps.

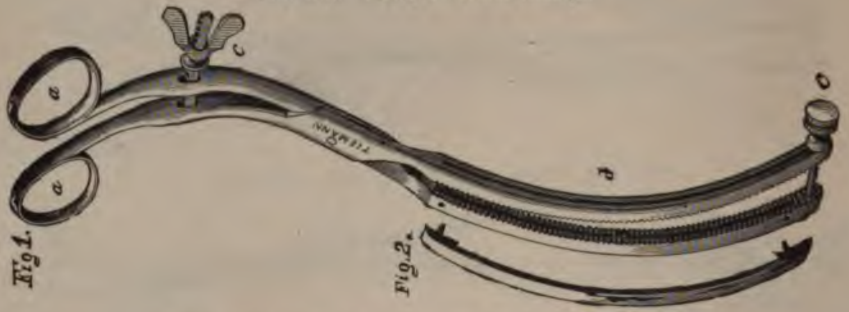
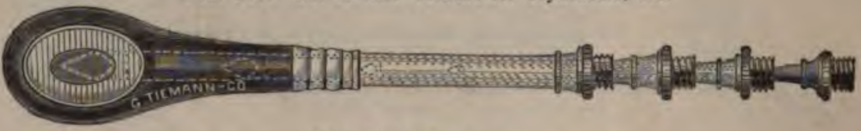
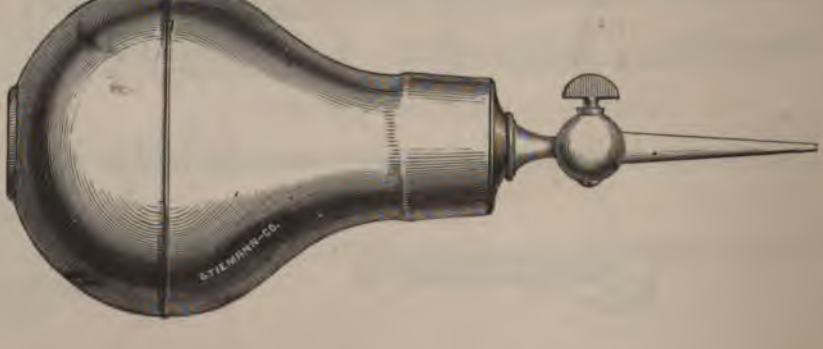


Fig. 177. Set of four Trocars for Hydrocele, etc.



Also Plain Trocars.

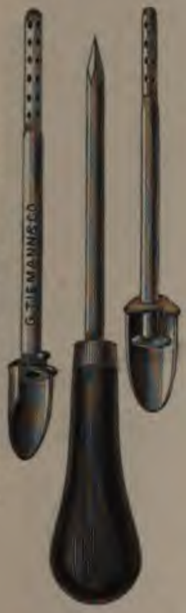
Fig. 178. Rubber Bag and Stopcock for injecting (Hydrocele).


G.TIEMANN-CO.

URETHRAL INSTRUMENTS.

FIG. 179. Miliano's Ready Strapper, or Compressor, for Varicocele Swelling, etc., of the Testes.

FIG. 179b. Wood's and Harris' Trocars.


G. TIEMANN & CO.

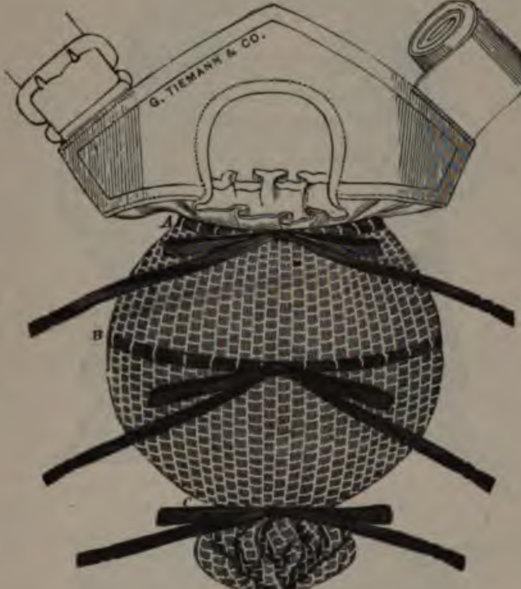
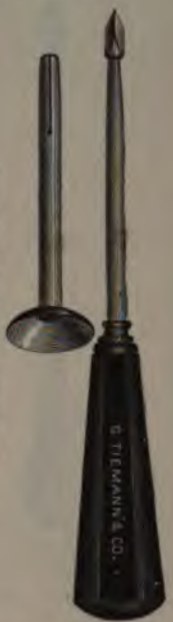


FIG. 179c. Trocar and Canula.


G. TIEMANN & CO.

We keep in store a large assortment of SUSPENSORY BANDAGES of all kinds and patterns, made of silk, linen, cotton, leather, etc.

FIG. 180. Urinals for Incontinence.

FIG. 47.

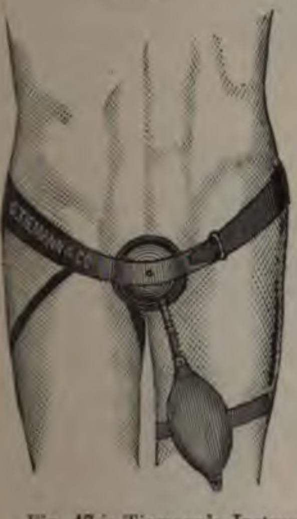


FIG. 48.

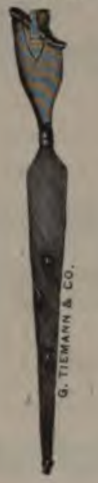

G. TIEMANN & CO.

FIG. 49.

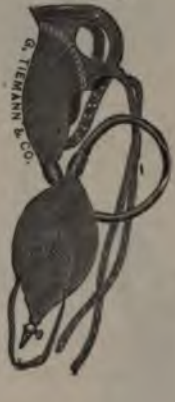

G. TIEMANN & CO.

FIG. 50.

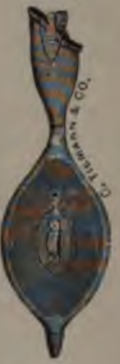

G. TIEMANN & CO.

Fig. 47 is Tiemann's Instrument for inverted (Extrophy of) bladder. It consists of a metallic or hard rubber shield, to the lower extremity of which is attached an elastic tube, leading to a soft rubber pouch, to collect the urine. This is buckled to the thigh, or may be carried down to the boot. Figs. 48, 49, 50, represent soft rubber urinals for incontinence of urine. We have various other patterns, for males and females, of English, French and American make. (Figs, 47, 48, 49, 50, are transferred from Part IV, page 20, for uniformity's sake, when ordering from either book.)

FUMIGATION APPARATUS.

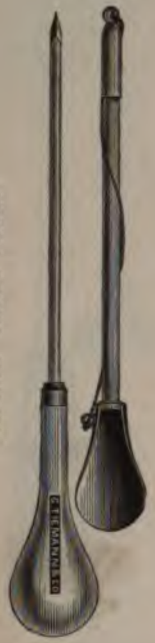
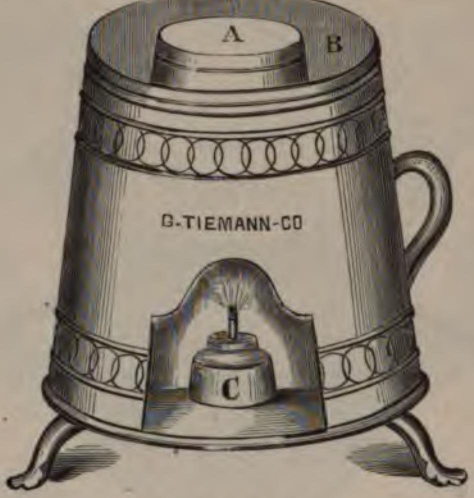


FIG. 181*b*. Little's Trocar.

FIG. 181. Lee's Lamp, modified by Bumstead.



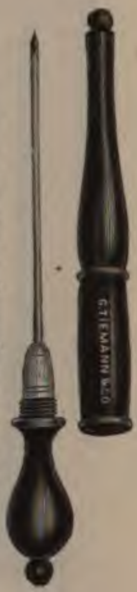
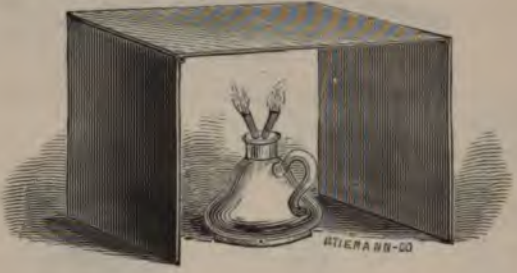


FIG. 181*c*. Exploring Trocar and Case.

FIG. 182. Van Buren's Lamp.



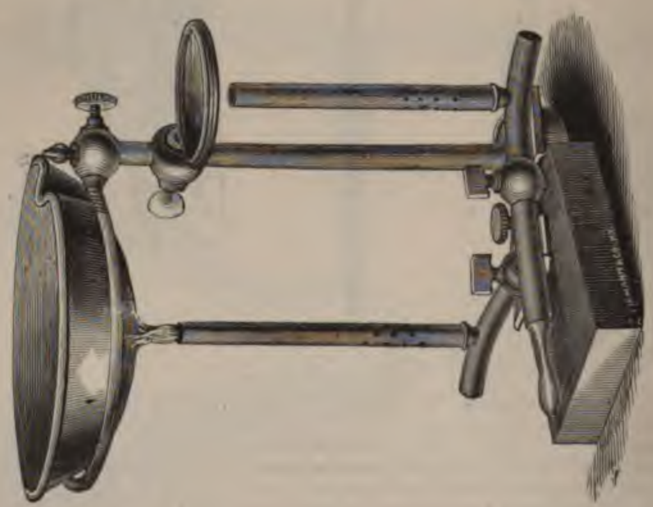
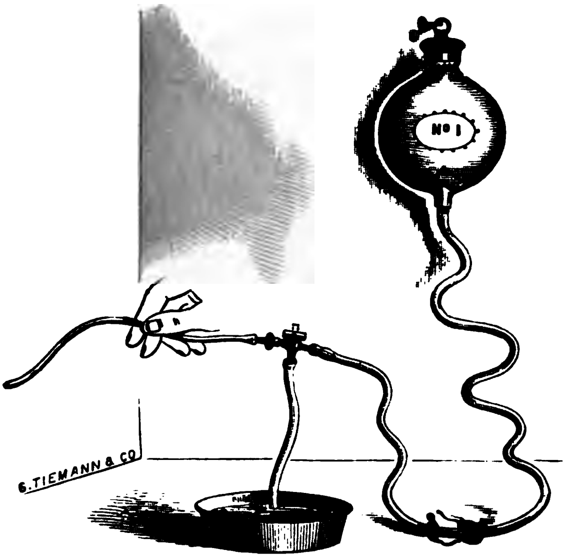


FIG. 183 Maury's Apparatus, for Mercurial Fumigations.

A New Instrument for the Injection of the Bladder.

BY E. L. KEYES, M. D., OF NEW YORK.

FIG. 184.



PRICE, $6.00.

The simplicity of the instrument as figured is obvious. To the fountain-syringe bag holding a pint, and tube of variable length, so as to allow, if desirable, considerable pressure by elevating the bag, is attached a two-way stop-cock. Upon the tube is another stop-cock only useful when it is desired, having thrown a medicated solution into the bladder, to retain it there for a certain length of time without either allowing the bladder to become over full, or its contents to escape. The nozzle of the nickeled stop-cock is very large, nearly a quarter of an inch in diameter, and fits snugly into the expanded conical (also nickled) mouth piece. It is so large, and fits so easily, that the most clumsy fingers can readily adjust it almost unaided by sight. Upon this conical catheter mouth-piece is fitted a thin piece of rubber tubing covering its upper two-thirds. This allows the mouth-piece to be used with any metallic or other hard catheter, and prevents leakage. The fine conical point of the mouth-piece is to be screwed into any soft catheter before introducing the latter. The other branch of the two-way stop-cock is fitted into a short piece of rubber tubing which conveys the urine and the washings into some convenient receptacle.

Full directions for use accompany the instrument.

GYNÆCOLOGICAL INSTRUMENTS.

FIG. 185. Gynæcological Bag.

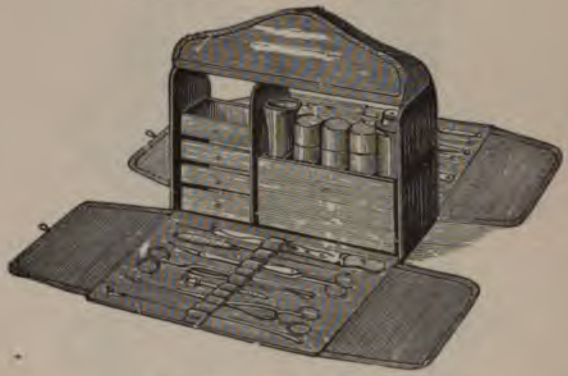
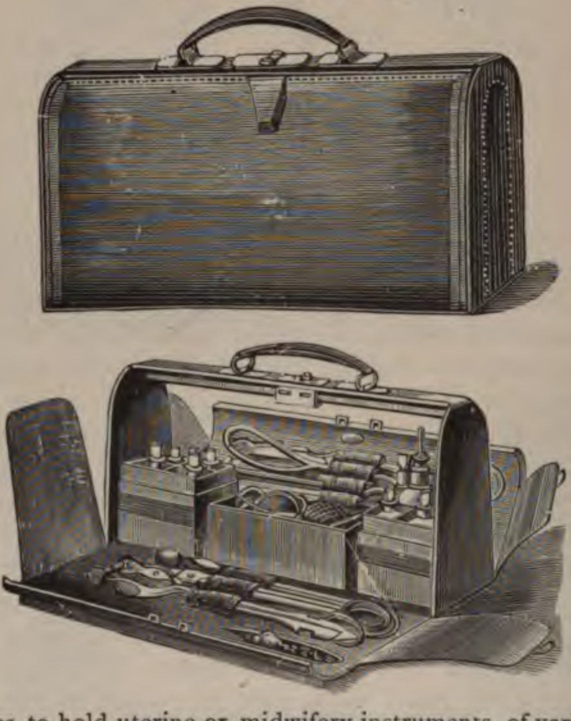


FIG. 186. Obstetrical Bag.



We make cases to hold uterine or midwifery instruments, of various patterns and designs, light, portable and strong, and very convenient to carry. They are covered externally with morocco, patent leather or russet-colored trunk leather. The instruments are laid into blocks carved out for them and lined with fine silk or oil-dyed cotton velvet. The cases are so arranged, that when opened, the instruments therein contained are all exhibited at one view. Physicians and Surgeons can have cases arranged according to their own design. On pages 53, etc., will be found Lists of Gynæcological and Obstetrical Sets, as recommended by eminent American Gynæcologists.

GYNÆCOLOGICAL INSTRUMENTS.

SPECULA VAGINÆ.

FIG. 187*a*. Weber's Speculum.

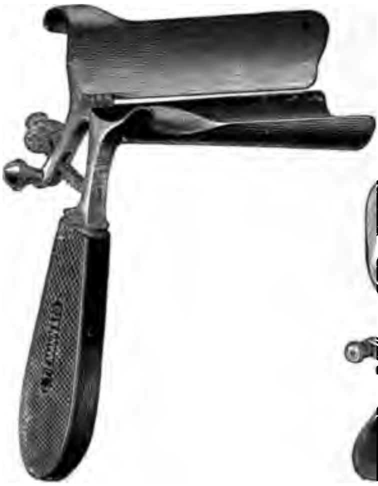


FIG. 187*b*. Fryer's Self-retaining Speculum.

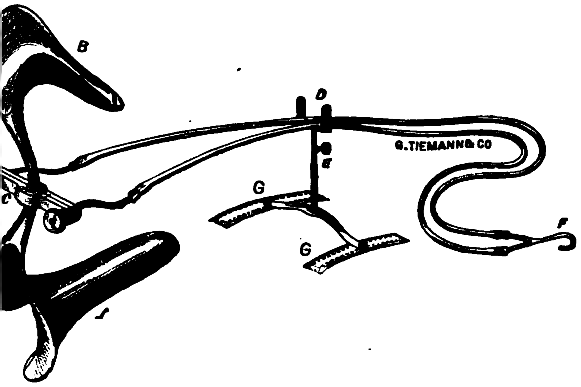


FIG. 187*c*. Graves' Speculum.

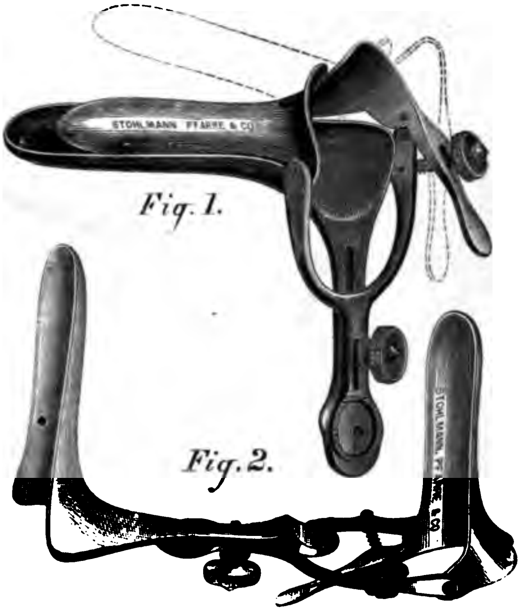
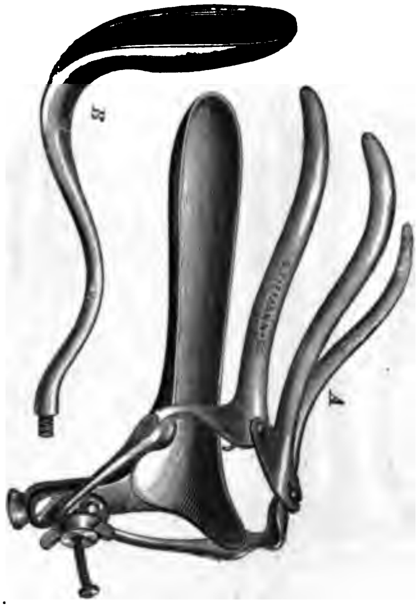

STOHLMANN PFARRE & CO
Fig. 1.
Fig. 2.
STOHLMANN PFARRE & CO

FIG. 187*d*. Jenk's Speculum.



SPECULA VAGINÆ.

FIG. 187*e*. Hornby's Speculum.

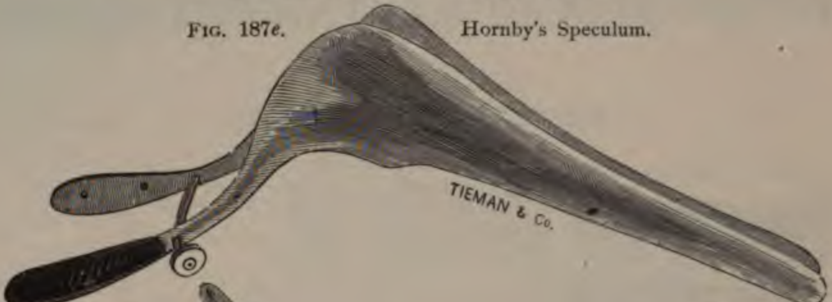


FIG. 188. Ferguson's Tubular Speculum.

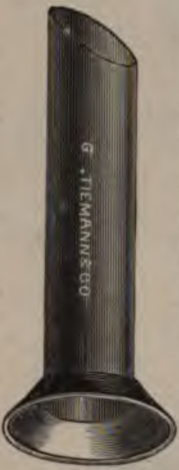


FIG. 189. Blakeley's Resilient Speculum.

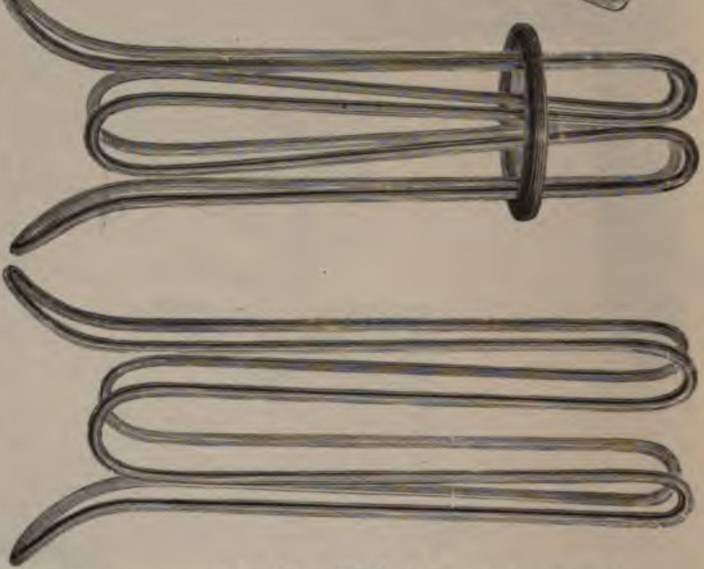


FIG. 190. Meadow's Trivalve Speculum.

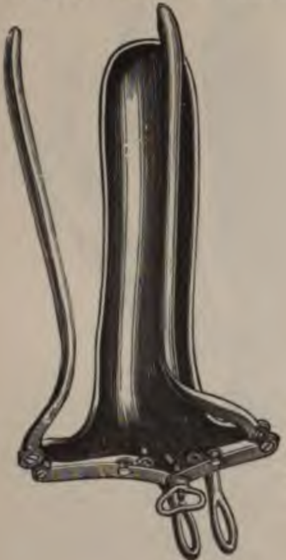
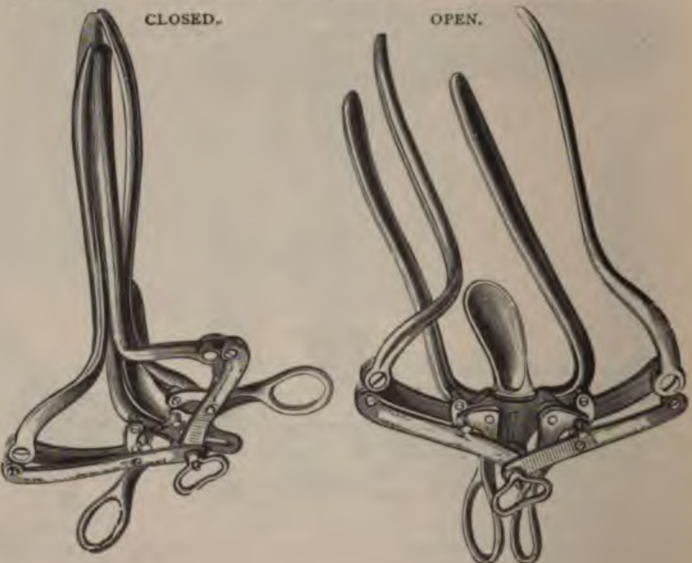
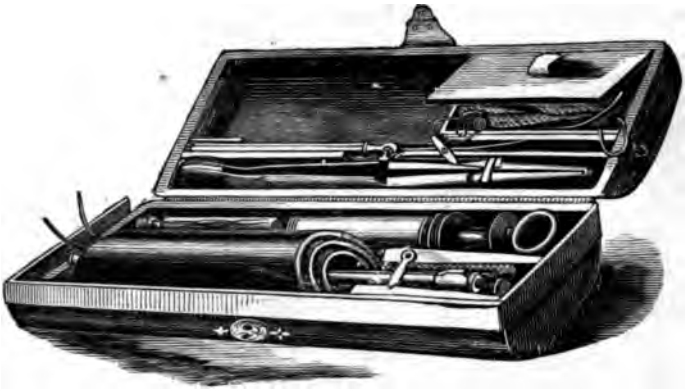


FIG. 191. Meadow's Quatrivalve Speculum.


CLOSED.
OPEN.

GYNÆCOLOGICAL INSTRUMENTS.

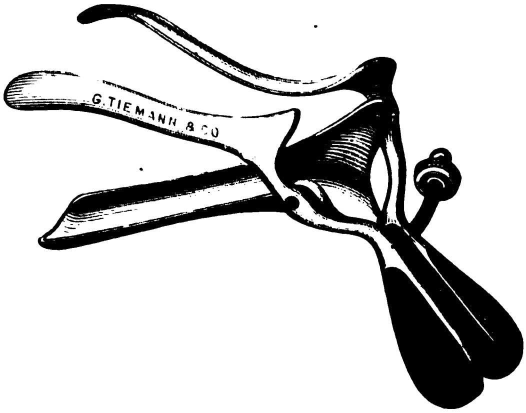
FIG. 192. **Buttles' Set of Uterine Instruments.**



Contains: 2 Glass Specula.
1 Hard Rubber Syringe, with two long pipes.
1 Handle to fit:
1 Simpson's Sound.
1 Flexible Silver Probe.
1 Sim's razor-shaped Knife.
1 Sponge Holder.
1 Cotton Expeller.
1 Budd's Whalebone Probe.
1 Scarifyer and Tenaculum.
1 Phial to carry Caustic.
1 Russet Leather Case, with metal hinge and lock, lined with oil-dyed velvet,........................ $23 00

The same, with Metallic Specula $26 00

FIG. 193. Nelson's Speculum Vaginæ.



GYNÆCOLOGICAL INSTRUMENTS.

SPECULA VAGINÆ.

Fig. 194. Thomas' Modification of Cusco's Speculum.

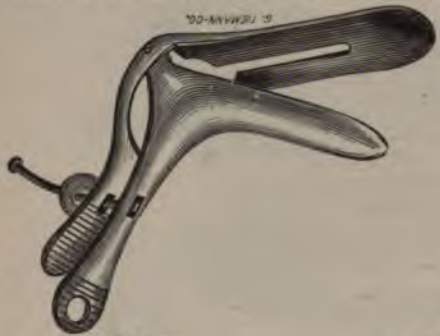


Fig. 195. Emmett's Self-Retaining Speculum.

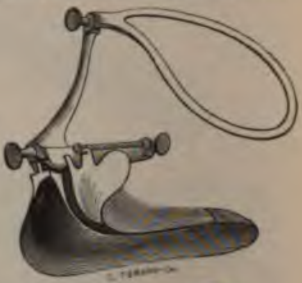


Fig. 196 (*a*). Segala's Speculum.
OPEN.

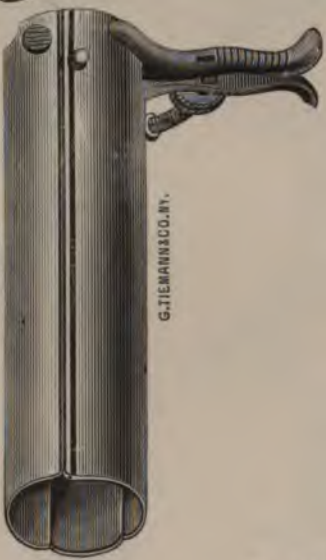


Fig. 196 (*b*). Segala's Speculum (closed).

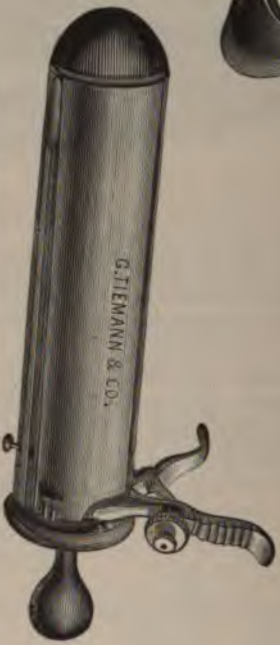


Fig. 196 (*c*). Obdurator for Segala's Speculum.

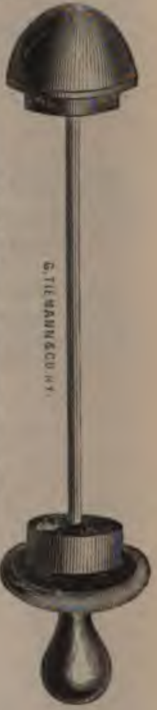
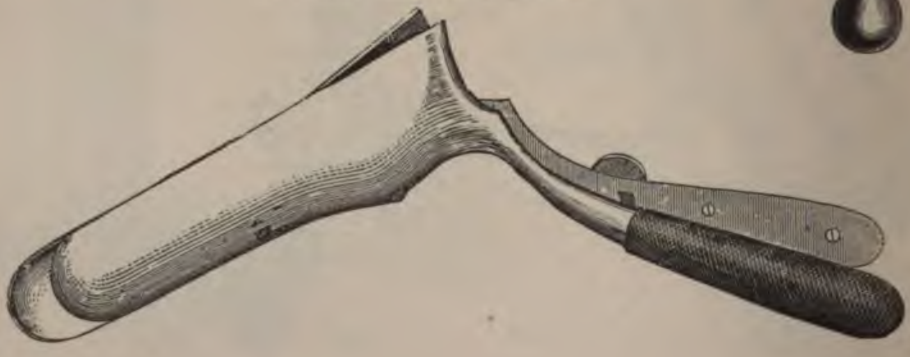
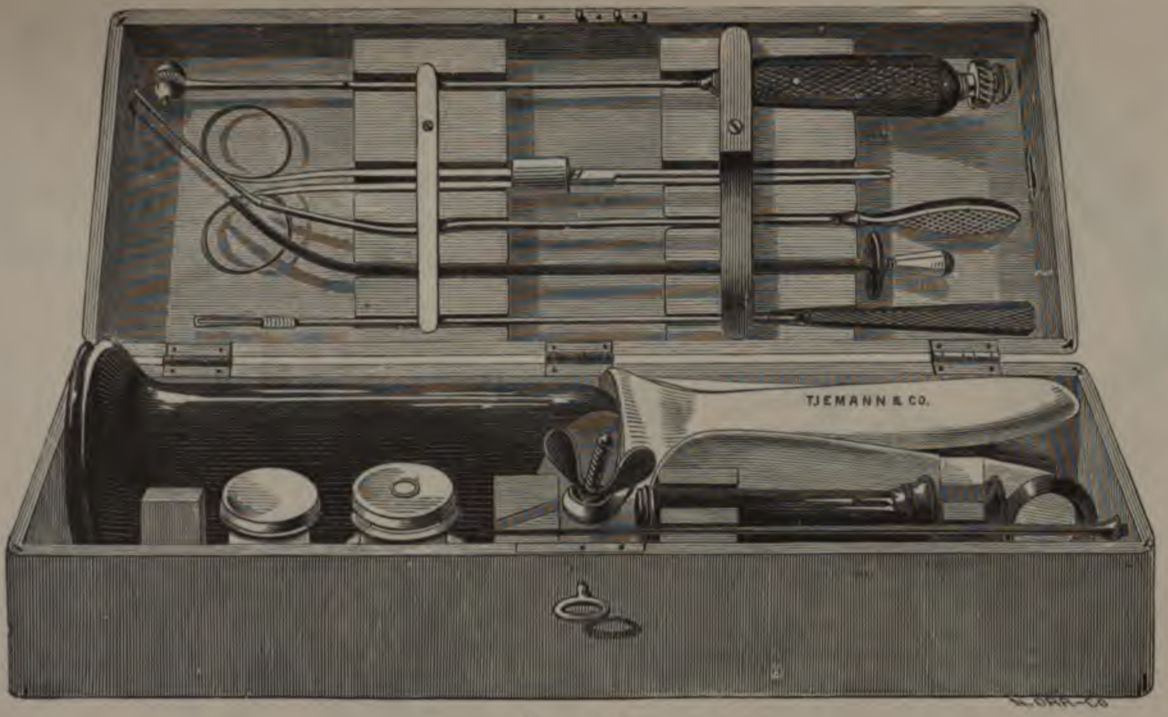


Fig. 197. Woodward's Speculum.



GYNÆCOLOGICAL INSTRUMENTS.

FIG. 198. **Gardener's Set of Uterine Instruments.**



Contains:

1 Gardner's Manifold Instrument,
1 Pair of Caustic Forceps, gilt.
1 Uterine Sound.
1 Barker's Salve Bougie.
1 Sponge Holder.
1 Tiemann & Co.'s Quadrivalve Speculum.
1 Long Pipe Syringe.
2 Cylindrical Glass Specula.
2 Bottles for Oil, &c.

1 Rosewood or Mahogany Case, lined with oil-dyed velvet, **$46 00**

GYNÆCOLOGICAL INSTRUMENTS.

SPECULA VAGINÆ.

FIG. 199. Nott's Speculum, with Chain.

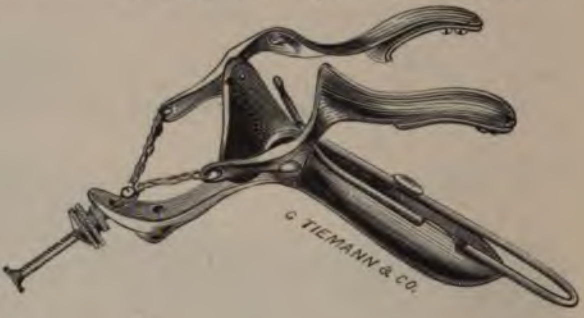


FIG. 200. Thomas' Tubular Speculum.

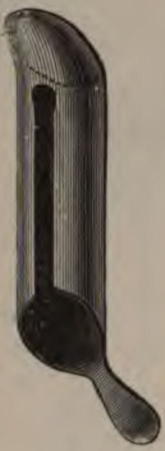


FIG. 201. Thomas' Telescopic Speculum.

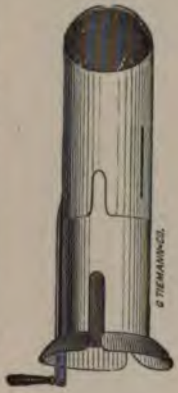


FIG. 202. Bozeman's Speculum.

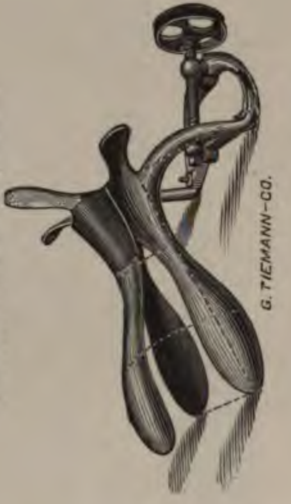


FIG. 203. Nott's Speculum (plain).

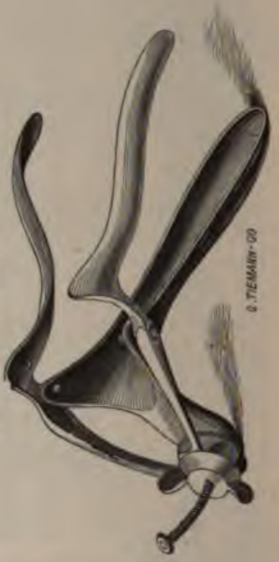
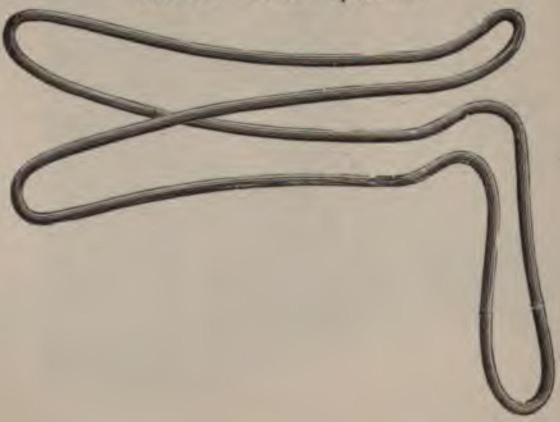


FIG. 204. French's Speculum.

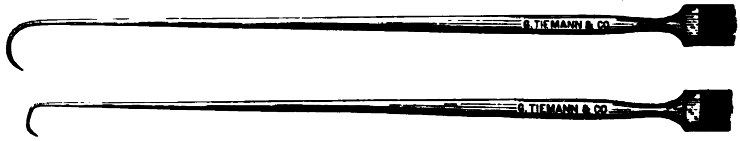


GYNÆCOLOGICAL INSTRUMENTS.

THOMAS' SET OF UTERINE INSTRUMENTS.

1 Thomas' Cusco's Speculum.
1 Thomas' Sims' Speculum.
1 Caustic Holder.
1 Pair (Uterine) Dressing Forceps.
1 Thomas' Cotton Expeller.
1 Small Uterine Probe.
2 Whalebone Swabs.
2 Sponge Holders.
1 Long Pipe Syringe.
1 Long-handled Tenaculum.
1 Small Phial, for holding solid caustic, *none for fluid !*
place for a small roll of cotton batting and small sponges.
12 Sponge Tents.
1 Uterine Scarificator.
1 Mahogany, rosewood or morocco covered case, lined with oil-dyed velvet, ... $46 00

FIG. 204*b*. Emmett's Tenacula.



ELLIOTT'S SET OF UTERINE INSTRUMENTS.

1 Handle to fit:
1 Simpson's Sound.
1 Guarded Scarifyer.
1 Sanger's Porte Caustic.
1 Ointment Bougie.
2 Mirror Specula.
1 Long Pipe Syringe,
1 Uterine Probe.
2 Phials with Glass Stoppers.
1 Pair Uterine Dressing Forceps.
1 Rosewood or mahogany Case, lined with oil-dyed velvet... $25 00

GYNÆCOLOGICAL INSTRUMENTS.

SPECULA VAGINÆ.

FIG. 205. Storer's Speculum, when used as Cusco's.

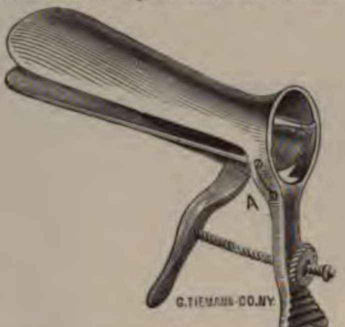


FIG. 206. Hunter's Speculum.

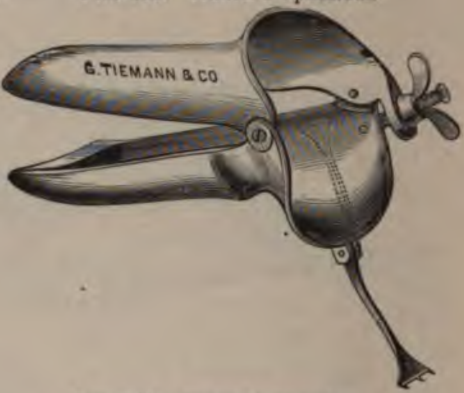


FIG. 207. Storer's Speculum, when used as Sims'.

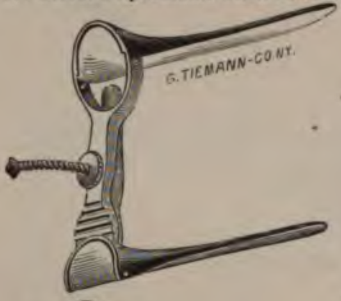
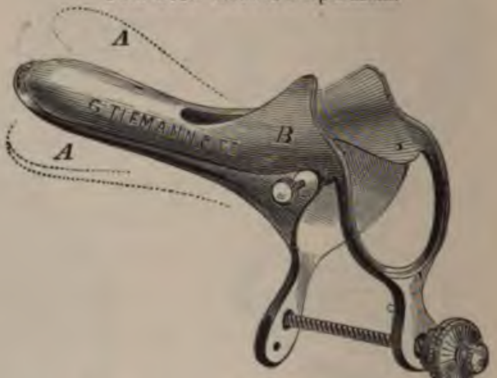

G.TIEMANN-CO.NY.

FIG. 208. Brewer's Speculum.



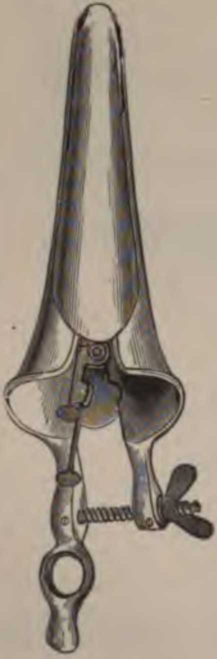
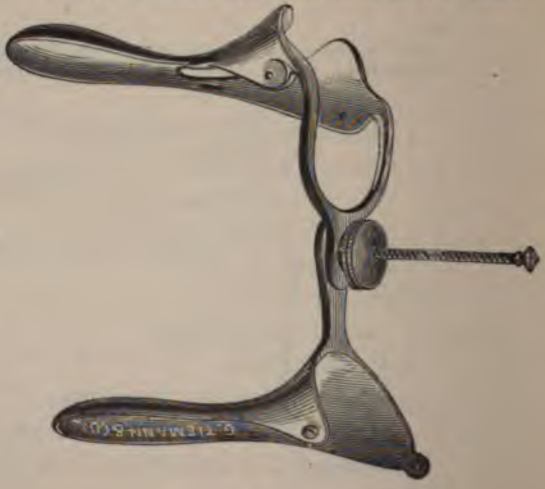


FIG. 210. Tiemann & Co.'s Quatrivalve Speculum.

FIG. 209. Brewer's Speculum, when used as Sims'.


G.TIEMANN & CO.

SIMS' SET OF INSTRUMENTS FOR UTERINE SURGERY.

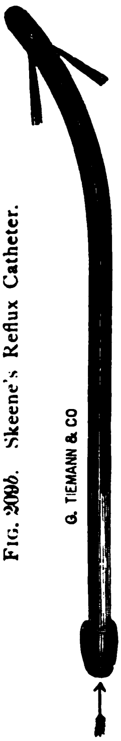


FIG. 2096. Skeene's Reflux Catheter.

1 Sims' Curette.
2 Sponge Holders.
1 Pair McClintock's Polypus Forceps.
1 Pair of Sims' Polypus Forceps.
1 Sims' Porte-Chain Ecraseur.
1 Aveling's Polyptrite.
1 Simpson's Hysterotome.
1 Pair of Curved Scissors.
1 Sim's moveable-blade Knife.
1 Priestley's Dilator, (or Ferguson's).
1 Pair of Tenaculum Forceps.
1 Uterine Repositor.
1 Porte Tampon.
1 Forked Sound.
1 Vaginal Dilator.
1 Mahogany, rosewood or morocco-covered Case, lined with oil-dyed velvet........................ $125 00

SKEENE'S SET OF UTERINE INSTRUMENTS.

1	Sims' Speculum..	$4 00
1	" latest Needle Forceps, Skeene's modified....................	5 50
1	Skeene's Scarifyer and Sound..................................	6 00
1	" Elevator	8 00
1	Long Pipe Syringe..	1 50
1	Nott's Depressor..	1 50
1	Uterine Dressing Forceps,..	2 00
1	Straight Scissors	3 50
1	Curved "	4 50
1	Tenaculum..	1 25
1	Uterine Probe and Slide	1 75
1	Skeene's Curette..	2 00
1	Sponge Holder,..	1 00
1	Simpson's Sound, graduated..	1 75
	In Russet Leather Case, oil-dyed velvet	10 00
		$54 25

GYNÆCOLOGICAL INSTRUMENTS.

SPECULA VAGINÆ.

FIG. 211. Dicken's Speculum.

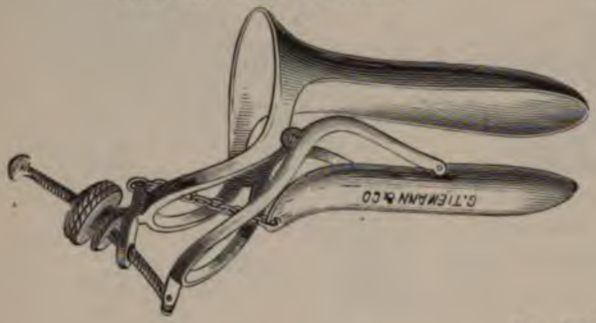


FIG. 212. Thomas' Latest Speculum.

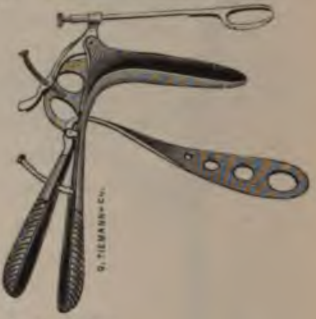


FIG. 214. Byrne's Speculum.

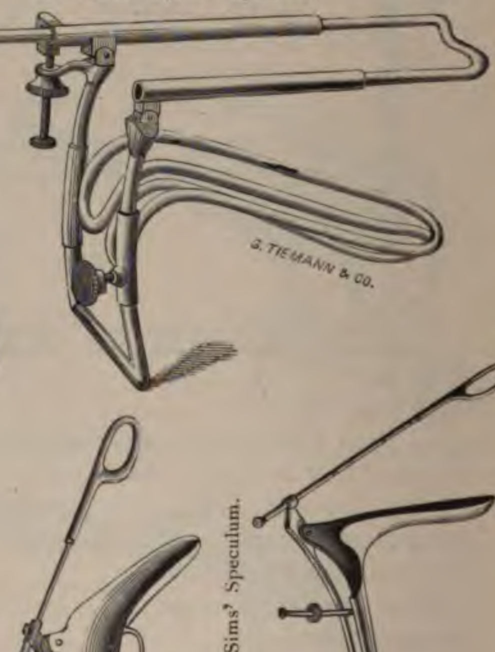


FIG. 213. Steel Bivalve Speculum.

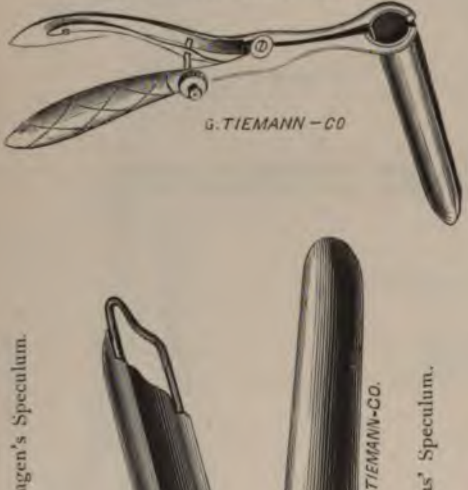


FIG. 215. Wackerhagen's Speculum.

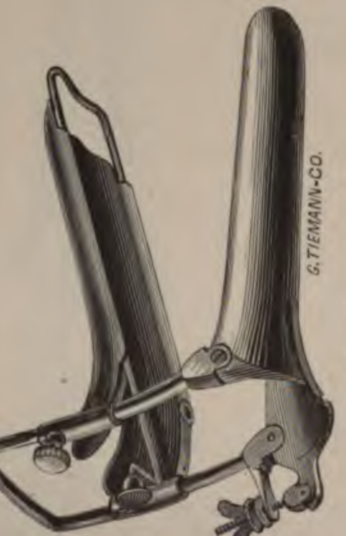


FIG. 216. Thomas' Speculum.

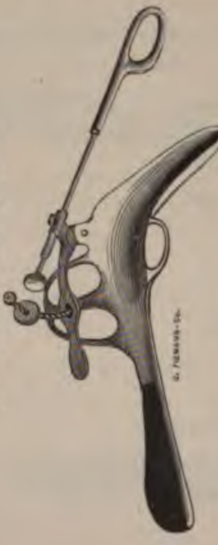
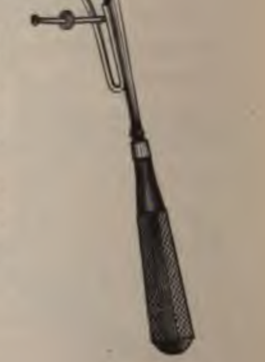


FIG. 217. Thomas' Sims' Speculum.



NOTT'S SET OF UTERINE INSTRUMENTS.

1	Nott's Speculum and Tenaculum	$8 00
1	Nott's Depressor	1 50
1	Roux' Needle-Holder	4 50
1	Applicator and Expeller	1 00
1	Sponge-Holder	1 50
1	Lead Sound	0 40
1	Scarifying Knife	1 00
1	Simpson's Sound	1 50
1	Uterine Probe, pure silver	1 25
1	Nott's Uterine Dilator	3 50
1	Nott's Uterine Catheter	3 50
1	Double Spring Tenaculum	3 00
1	Hard Rubber Syringe, for cleansing Vagina and Uterus	3 00
1	Lente's Ointment Syringe	6 50
1	Lente's Platina Cup	3 50
1	Pair of Uterine Dressing Forceps	2 00
1	Pair of Needle Forceps	4 00
1	Pair of Seizing Forceps	4 00
1	Straight Scalpel	1 50
1	Curved Scalpel	1 50
1	Pair of Emmett's Scissors	4 50
1	Sims' Adjuster	1 50
1	Sims' Wire Pulley	1 25
1	Sims' Blunt Hook	1 25
1	Sims' Sigmoid Catheter, tin	0 75
1	Sims' Sigmoid Catheter, hard rubber	1 00
1	Sims' Sigmoid Catheter, silver	2 00
1	Buttles' Scarifyer	1 75
1	Thomas' Dry Cupper and Suppository	2 00
1	Smith's Wire Ecraseur	6 00
6	Emmett's Round-Pointed Needles, Silk for Sutures and for Polypi, and six other Needles	1 25
3	Coils of Silver Wire	1 50
1	Whalebone Cotton Swab	0 50
2	Glass Bottles, for Caustic, etc.	0 06
12	Seatangle and Carbolized Sponge Tents	3 00
1	Long Delicate Tenaculum	1 25
1	Pair of Long Straight Scissors	3 50
1	Curette for scooping out the Uterus	1 75
1	Rosewood Case, lined with oil-dyed velvet, neatly arranged	20 00
	Amount	$111 46

A descriptive Pamphlet of this case of instruments may be had on application.

GYNÆCOLOGICAL INSTRUMENTS.

SPECULA VAGINÆ.

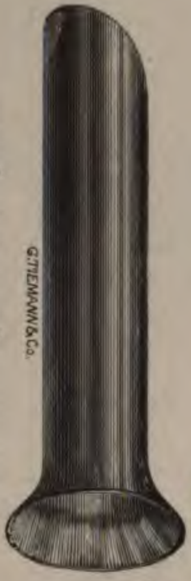


FIG. 218. Ferguson's Mirror Speculum.

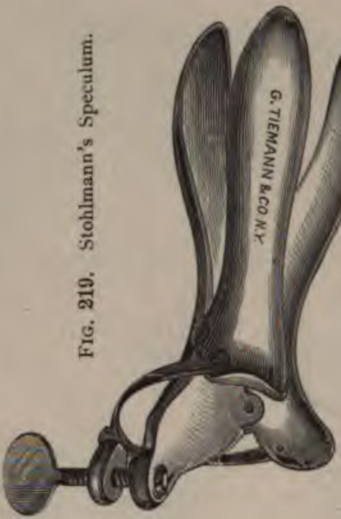


FIG. 219. Stohlmann's Speculum.

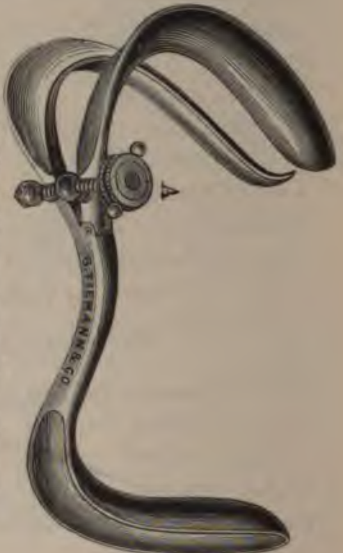


FIG. 220. Dawson's Sims' Dilating Speculum.

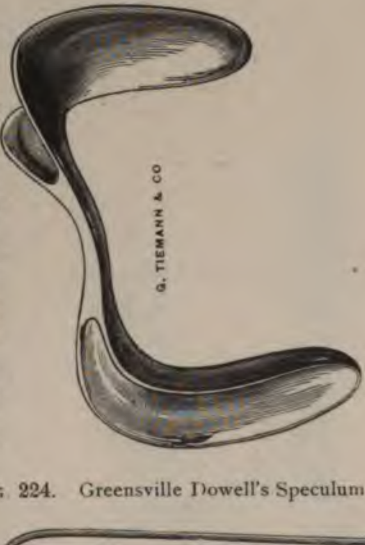
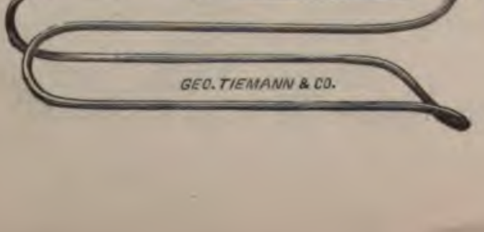


FIG. 221. Bozemann's Duck Bill Speculum.

FIG. 224. Greensville Dowell's Speculum.



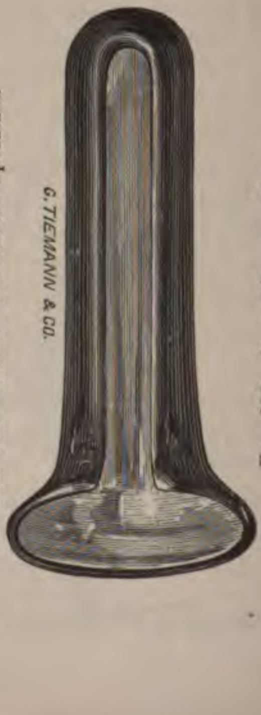


FIG. 222. Ashton's Fenestrated Speculum.

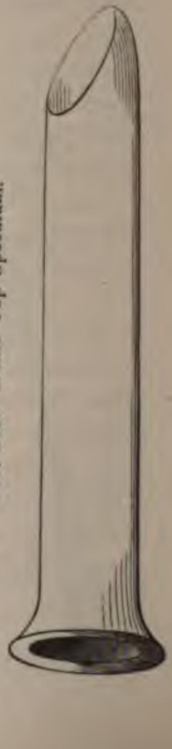


FIG. 223. Dome Top Speculum.

PEASLEE'S SET OF UTERINE INSTRUMENTS.

1 Sims' Speculum.
1 Pair of Speculum Forceps.
1 Uterine Tenaculum.
1 Peaslee's Sound.
1 Emmet's Applicator.
1 Peaslee's Metrotome.
1 Pair of Curved Uterine Scissors.
1 Uterine Scarificator.
1 Tube for Intra-Uterine Applications.
1 Uterine Syringe.
1 Catheter.
1 Peaslee's Curved Needle.
1 Emmet's Needle.
1 Pair of Needle Forceps.
1 Rosewood, Mahogany, or Morocco-covered Case, lined with oil-dyed Velvet. $60 00
2 Ferguson's Glass Specula.
1 Peaslee's Depressor.
1 Simpson's Sound.
1 Whalebone Probe.

Bozeman's Set of Instruments for Vesico Vaginal Fistula.

2 Pairs of Bozeman's Scissors, R. and L., curved.
1 Pair of Stout Straight Scissors.
1 Pair of Scissors, curved on the flat.
1 Pair of Shot-Smashing Forceps.
1 Perforating Awl.
1 Pair of Self-Closing Seizing Forceps.
1 Pair of Curved Forceps, lined with copper on the points, for holding and drawing wire sutures.
1 Bozeman's Clamp or Button Adjuster.
1 Bozeman's Wire Adjuster.
1 Fork Pulley.
1 Long Steel Probe in Ebony Handle.
1 Blunt Hook.
2 Tenacula.
2 Straight Scalpels.
2 Angular Scalpels, R. and L.
1 Urethra Depressor.
1 Curved and 1 straight Needle-Holder, both to fit one handle.
1 Pair of Shot-Perforating Forceps, with 1 extra Point.
1 Pair of Plain Forceps, finely cut at the points, inside.
3 Metal Sigmoid Catheters (Bozeman's).
5 Sizes of Silver Buttons.
2 Swan-Bill Speculums, four sizes.
3 Coils of Silver Suture Wire and some Silk.
1 Common Probang.
2 Sponge Holders.
12 Assorted Needles (Bozeman's).
1 Rosewood Case, lined with oil-dyed velvet. $100 00

GYNÆCOLOGICAL INSTRUMENTS.

SPECULA VAGINÆ.

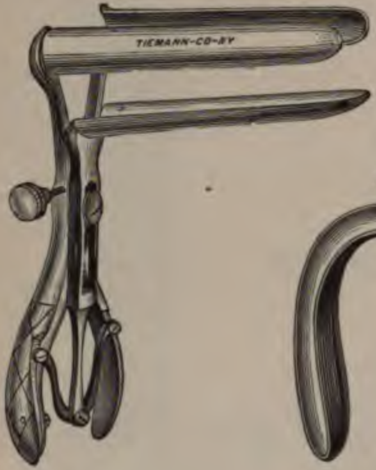


FIG. 225. Tiemann & Co.'s Trivalve Steel Speculum.

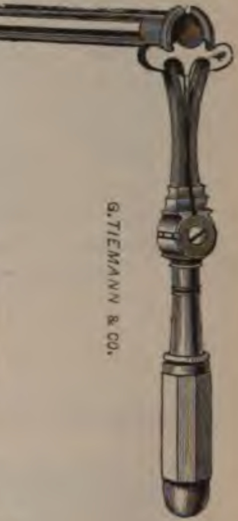


FIG. 226. Weiss' Speculum.

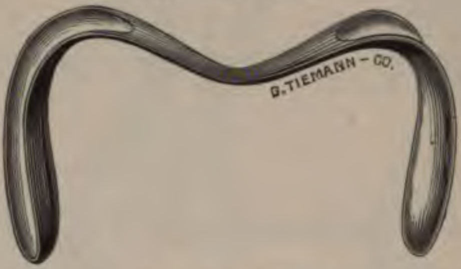


FIG. 227. Sims' Speculum.

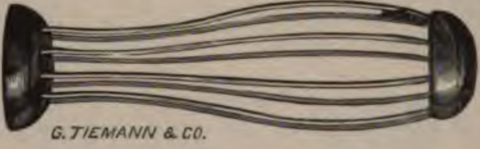


FIG. 228. Bath Speculum.

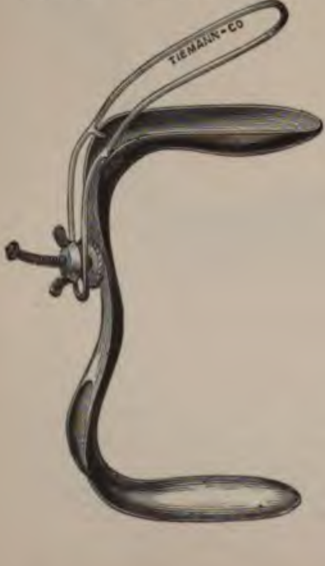


FIG. 229. Baxter's Speculum.

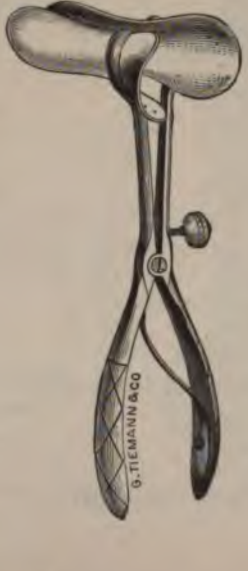


FIG. 230. Sims' Bivalve Speculum.

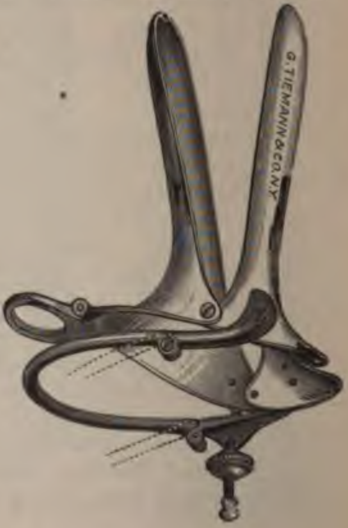


FIG. 231. Howard's Speculum.

Sims' Set of Instruments for Vesico-Vaginal Fistula.

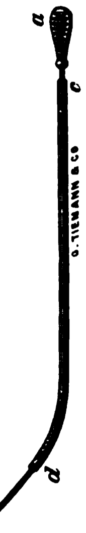


FIG. 231*b*. Turner's Applicator.

1 Pair of Scissors, curved on the flat.
1 Pair of Straight Scissors.
1 Pair of Scissors for removing Sutures.
1 Sims' Tenaculum.
2 Sims' Scalpels.
1 Sims' Speculum.
1 Sims' Suture Adjuster.
1 Sims' Wire Carrier.
1 Sims' Blunt Hook.
1 Pair of Sims' Dressing Forceps.
1 Pair of Sims' Seizing Forceps.
1 Pair of Sims' Wire-Twisting Forceps.
2 Sims' Sponge-Holders.
6 Needles and Silk.
2 Coils of Silver Suture Wire.
1 Morocco-covered Case, neatly arranged and lined with oil-dyed velvet. $50 00

Sims' Set of Instruments for Vesico-Vaginal Fistula.

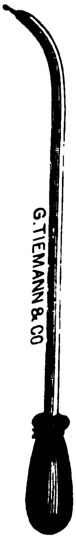


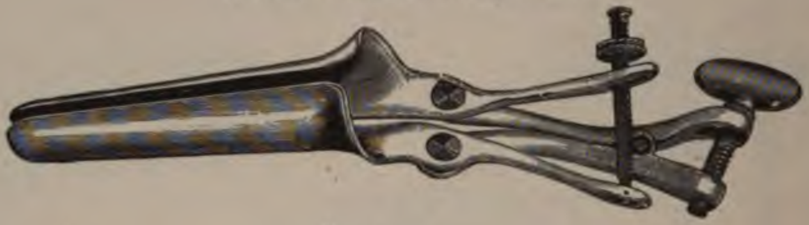
FIG. 231*c*. Skeene's Instillation Tube.

2 Silver Sigmoid Catheters.
2 Metal Sigmoid Catheters.
1 Sims' Speculum, plated.
1 Pair of Sims' Needle Forceps.
1 Pair of Straight Long-Handled Scissors.
1 Pair of Curved Long-Handled Scissors.
1 Pair of small, smooth-pointed Forceps.
1 Pair of Twisting Forceps, slide-catch.
1 Pair of Seizing Forceps.
2 Sims' Scalpels.
2 Sims' Tenacula.
1 Sims' Blunt Hook.
1 Sims' Suture Carrier.
1 Sims' Wire Adjuster.
6 Sims' Needles.
1 Coil Silver Wire.
2 Sponge Holders.
Some Lead Wire.
1 Mahogany, Rosewood or Morocco-covered Case, lined with oil-dyed velvet. $55 00

GYNÆCOLOGICAL INSTRUMENTS.

SPECULA VAGINÆ.

FIG. 232. Schlotterbeck's Speculum.



Pat., Feb. 24, 1874.

FIG. 233. Ball's Speculum.

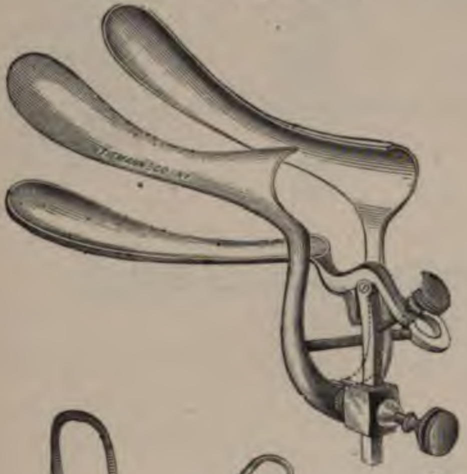


FIG. 234. Barnes' Neugebauer's Speculum.

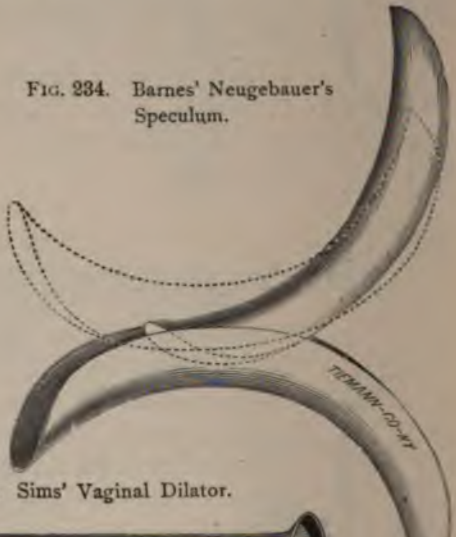


FIG. 235. Labia Speculum.

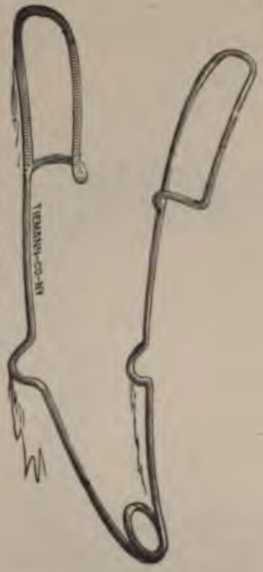


FIG. 236. Sims' Vaginal Dilator.

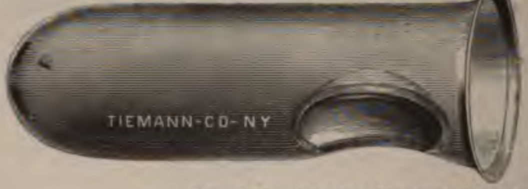
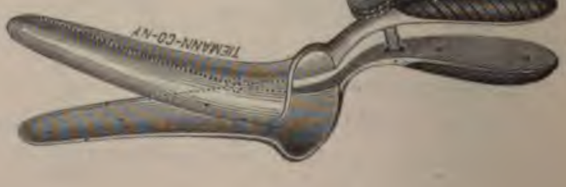


FIG. 237. Bivalve Vaginal Speculum.



GYNÆCOLOGICAL INSTRUMENTS.

FOR VESICO-VAGINAL FISTULA.

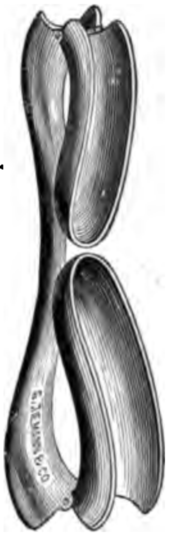


FIG. 238. Dawson's-Sims' Speculum.

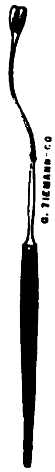


FIG. 239. Sims' Wire Adjuster.

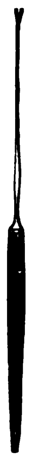


FIG. 240. Sims' Pulley or Fork.

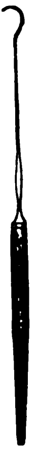


FIG. 241. Sims' Blunt Hook.

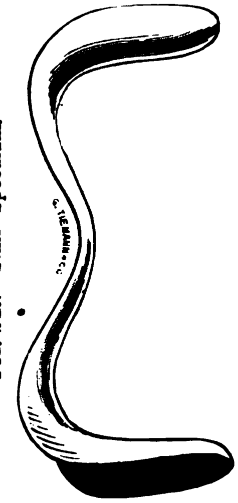


FIG. 242. Sims' Speculum.

Sims' Set of Instruments for Vesico-Vaginal Fistula and Uterine Operations.

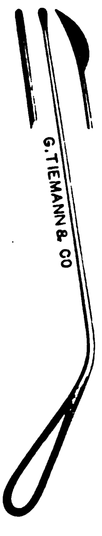


FIG. 242*b*. Skeene's Fissure Probe and Knife.

1 Sims' Speculum
1 Depressor.
1 Silver Caustic Probe.
1 Simpson's Sound.
2 Sponge Holders.
1 Pair of Sims' Twisting Forceps.
1 Pair of Sims' Seizing Forceps.
1 Pair of Scissors, curved to the right side.
1 Pair of Scissors, curved to the left side.
1 Pair of Sims' Needle Forceps.
1 Pair of Straight Scissors.
1 Sims' Revolving Knife.
1 Sims' Wire Adjuster.
1 Sims' Suture Carrier.
1 Sims' Uterine Repositor.
2 Sims' Scalpels.
2 Sims' Tenacula.
1 Sims' Blunt Hook.
1 Sims' Silver Sigmoid Catheter.
4 Metal Sigmoid Catheters.
4 Coils Silver Wire.
12 Sims' Needles.
1 Mahogany, Rosewood or Morocco-covered Case, lined with oil-dyed velvet. $75.00

GYNÆCOLOGICAL INSTRUMENTS.

FOR VESICO-VAGINAL FISTULA.

FIG. 243. Sponge-Holder, German Silver.

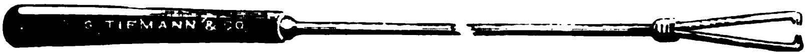

G. TIEMANN & CO.

FIG. 244. Sponge-Holder, Iron, Ebony Handle.

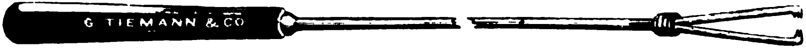


FIG. 245. Bozeman's Button Adjuster.

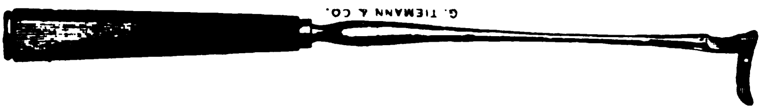


FIG. 246. Bozeman's Depressor.

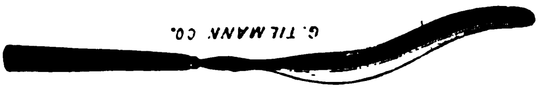


FIG. 247. Sims' Sigmoid Catheter.

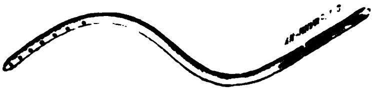


FIG. 248. Sims' Depressor.

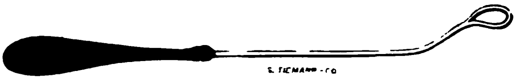
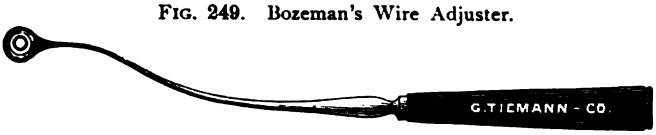


FIG. 249. Bozeman's Wire Adjuster.


G. TIEMANN - CO.

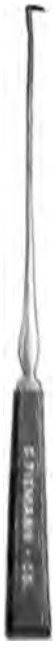


FIG. 250. Bozeman's Tenaculum.

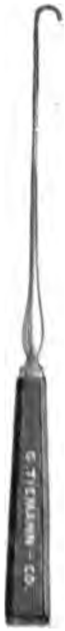


FIG. 251. Bozeman's Blunt Hook.

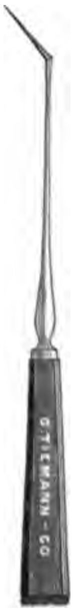


FIG. 252. Bozeman's Angular Scalpel, curved r. and l.

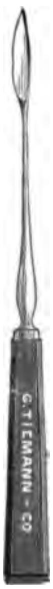


FIG. 253. Bozeman's Straight Scalpel.

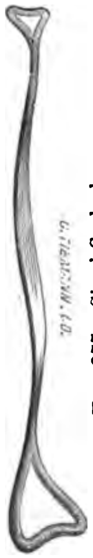


FIG. 254. Nott's Depressor

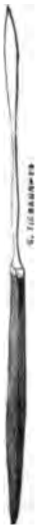


FIG. 255. Sims' Scalpel.

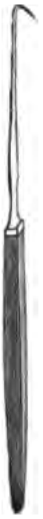


FIG. 256. Sims' Tenaculum.

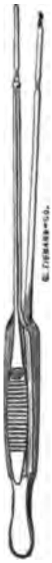


FIG. 257. Sims' Seizing Forceps.

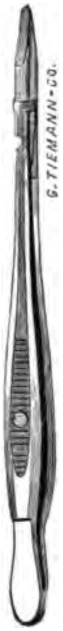


FIG. 258. Nott's Needle and Twisting Forceps.

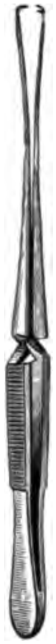


FIG. 259. Sponge or Seizing Forceps.

BRICKELL'S SET OF OBSTETRICAL INSTRUMENTS.

1 Pair of Brickell's Long Forceps.
1 Pair of Brickell's Short Forceps.
1 Pair of Straight Craniotomy Forceps.
1 Pair of Curved Craniotomy Forceps.
1 Perforator.
1 Vectis.
1 Guarded Blunt Hook.
1 Guarded Crotchet.
1 Leather Pouch, lined with oil-dyed velvet.
l the instruments nickel-plated. $48.00

BEDFORD'S SET OF OBSTETRICAL INSTRUMENTS.

1 Pair of Bedford's Forceps.
1 Bedford's Perforator.
1 Pair of Placenta Forceps.
1 Blunt Hook and Crotchet, combined.
1 Leather Pouch, lined with oil-dyed velvet. $28.00

BUDD'S SET OF OBSTETRICAL INSTRUMENTS.

1 Pair of Budd's Forceps.
1 Blunt Hook and Crotchet.
1 Perforator.
1 Pair of Placenta Forceps.
1 Pair of Craniotomy Forceps.
1 Pair of Simpson's Short Forceps.
1 Patent-Leather Case, neatly arranged and lined with oil-dyed velvet. $40.00

THOMAS' SET OF OBSTETRICAL INSTRUMENTS.

1 Pair of Elliott's Forceps, rather heavy.
1 Pair of Davie's Short Forceps.
1 Trephine, for Perforating.
1 Blunt Hook and Crotchet.
1 Simpson's Cranioclast.
1 Cephalotrite.
1 Gum Elastic Catheter.
1 8 oz. Phial for Chloroform.
1 Case, patent leather. $66.00

GYNÆCOLOGICAL INSTRUMENTS.

Vesico-Vaginal Fistula and Uterine Scissors.

FIG. 260. Bozeman's Angular Scissors.

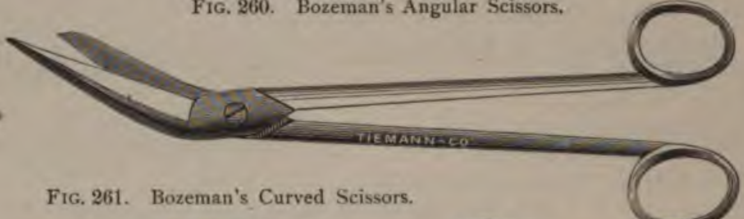


FIG. 261. Bozeman's Curved Scissors.

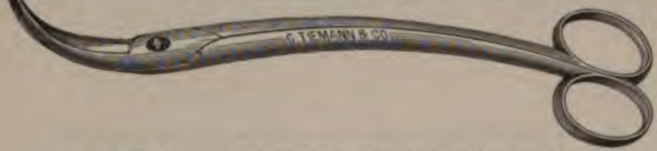


FIG. 262. Sims' Curved Scissors.

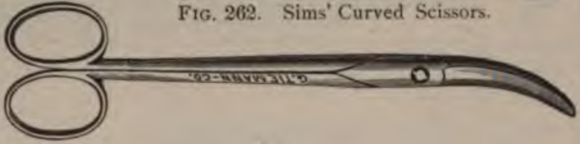


FIG. 263. Emmett's Curved Scissors.

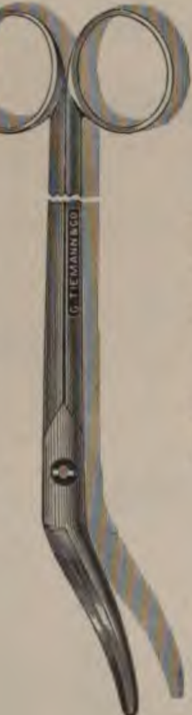


FIG. 264. Sims' Straight Scissors.

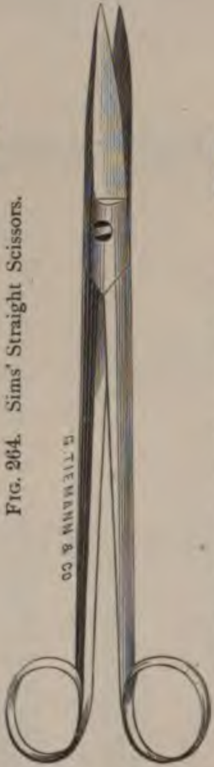


FIG. 265. Emmett's Double-curve Scissors.

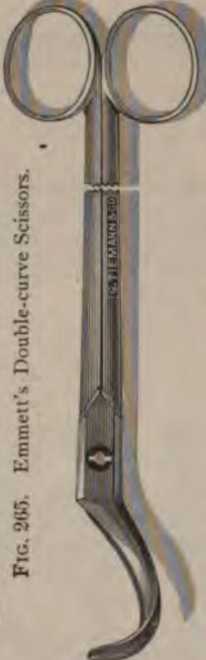
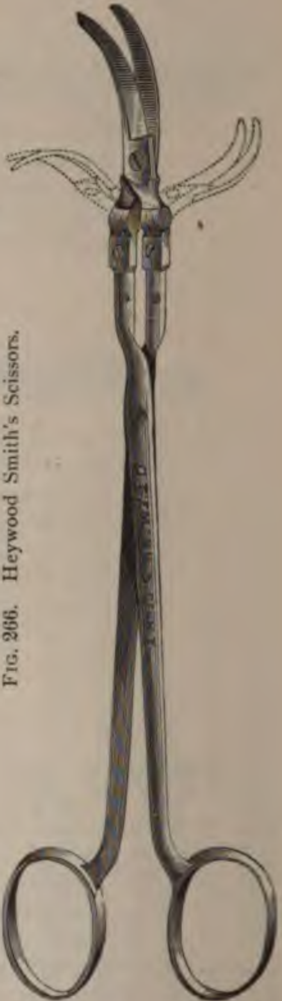


FIG. 266. Heywood Smith's Scissors.



GYNÆCOLOGICAL INSTRUMENTS.

FOR VESICO-VAGINAL FISTULA.

FIG. 267. Bozeman's Double Curve Scissors.

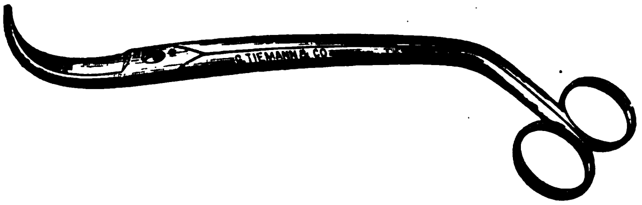
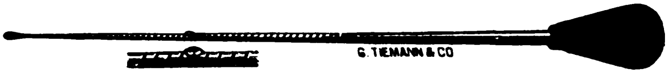


Fig. 267*b*. Jenk's Uterine Probe.



ELLIOTT'S SET OF OBSTETRICAL INSTRUMENTS.

1 Pair of Elliott's Forceps.
1 Ebony-Handled Blunt Hook
1 Ebony-Handled Crotchet.
1 Blots' Perforator.
1 Pair of Plain Placenta Forceps.
1 Pair of Ramsbotham's Craniotomy Forceps.
1 Roll-up Pouch, lined with oil-dyed velvet. $35.00

TAYLOR'S SET OF OBSTETRICAL INSTRUMENTS.

1 Pair of Taylor's Forceps.
1 Smelley's Perforator.
1 Pair of Craniotomy Forceps.
1 Pair of Placenta Forceps.
1 Blunt Hook and Crotchet combined.
1 Leather Pouch, lined with oil-dyed velvet. $28.00

HODGE'S SET OF OBSTETRICAL INSTRUMENTS.

1 Pair of Hodge's Forceps.
1 Blunt Hook and Crotchet, combined.
1 Bedford's Perforator.
1 Leather Pouch, lined with oil-dyed velvet. $16.00

GYNÆCOLOGICAL INSTRUMENTS.

FOR VESICO-VAGINAL FISTULA.

FIG. 268.
Arranging the Button or Shot Suture.

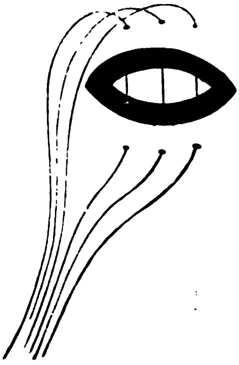


FIG. 269. Bozeman's Buttons Applied.

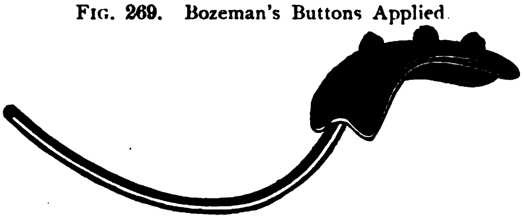


FIG. 270. Wire-Twisting Forceps and Scissors to cut the Wire.

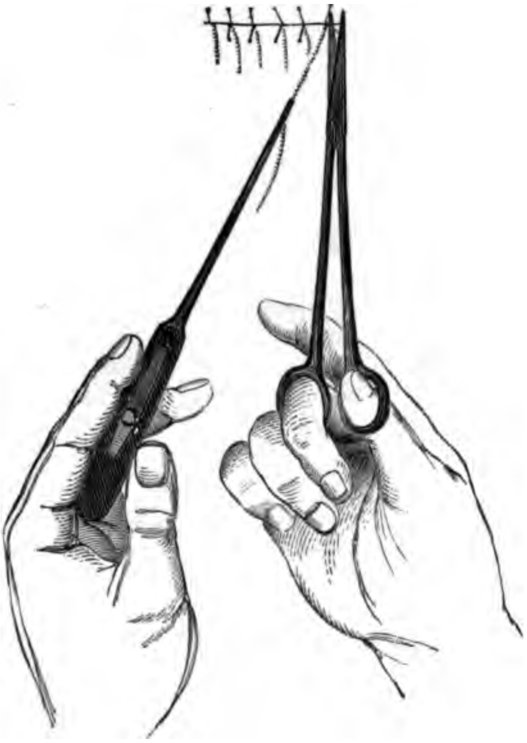


FIG. 271.
Bozeman's Buttons.

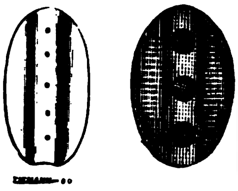


FIG. 272. Bozeman's Needle Carrier.

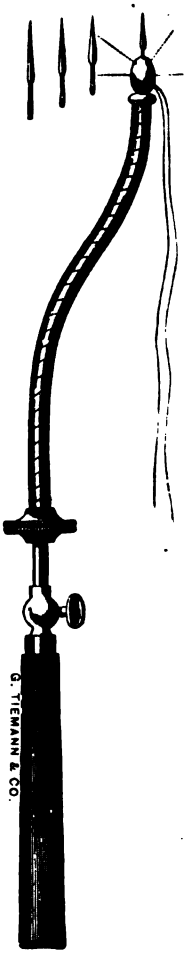


FIG. 273. Bozeman's Button Shaper.

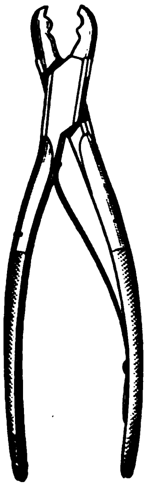
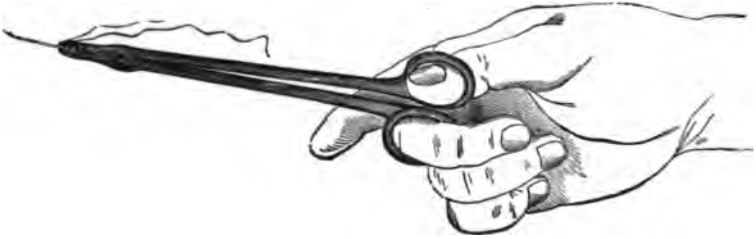


FIG. 274. Sims' Needle Forceps.



Bozeman's, Emmet's and Sims' Needles, &c.
See also Fig. 354, Sims' new Needle and Knife-Holder.

GYNÆCOLOGICAL INSTRUMENTS.

UTERINE PROBES AND SOUNDS.

FIG. 275. Thomas' Hard Rubber Probe.

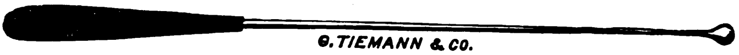


FIG. 276. Silver Uterine Probe.

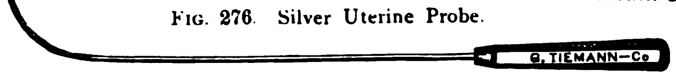


FIG 277. Sponge Tent Expeller.

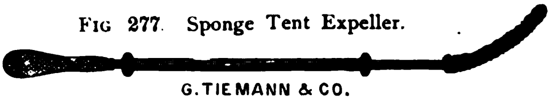


FIG. 278. Emmet's Applicator.

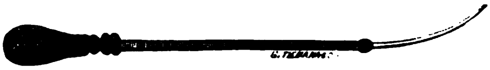


FIG. 279. Thomas' Elastic Probe.

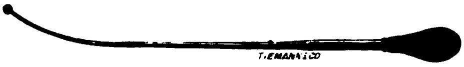
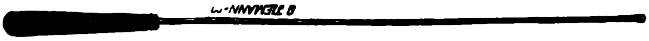


FIG 280. Silver Uterine Probe.



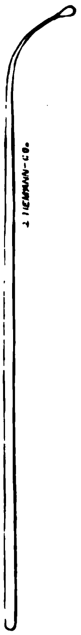


FIG. 281. Leaden Probe.

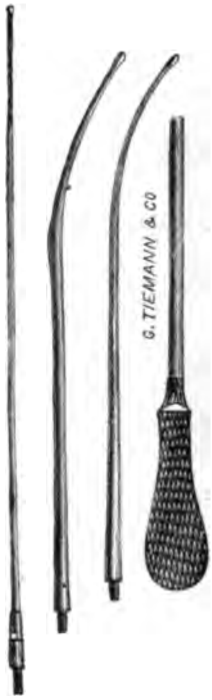


FIG. 282. Chapman's Probe and Sounds.

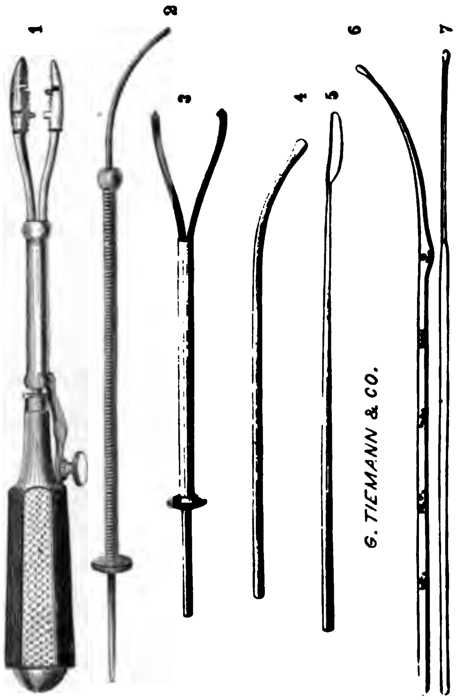


FIG. 283. Nott's Uterine Instruments.

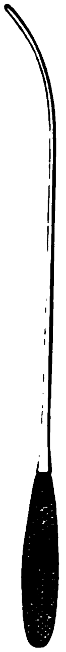


FIG. 284. Whalebone Probe.

Fig. 283. No. 1 is a modification of Roux Needle-Holder. It is an excellent Needle-Holder, which may be used in the operations of vesico-vaginal fistula, cleft palate, etc., and it is made to serve as a handle to the instruments accompanying it.

No. 2 combines the *Applicator* with the Sponge Tent Expeller.
No. 3 is a Sponge Holder and Ligating Forceps.
No. 4, a Lead Sound, which easily follows the curve of the uterus.
No. 5, Intra Uterine Scarifying Knife, blunt point.
No. 6, Simpson's Sound.
No. 7. Uterine Probe, of pure silver.

PART III.

GYNÆCOLOGICAL INSTRUMENTS.

Uterine Dressing Instruments.

FIG. 285. Bozeman's Dressing Forceps.

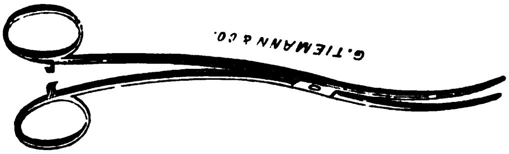


FIG. 286. Sims' Caustic Forceps.

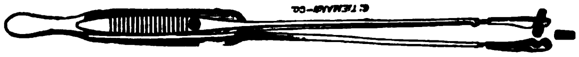


FIG. 287. Uterine Dressing Forceps.

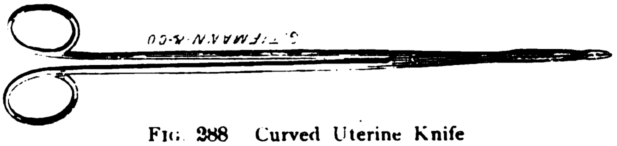


FIG. 288 Curved Uterine Knife

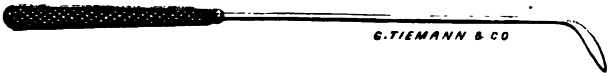


FIG. 289. Newman's Metrorgnnon.

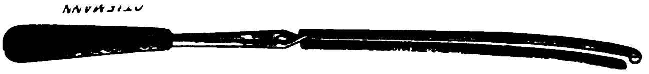


FIG. 290. Whalebone Probang.

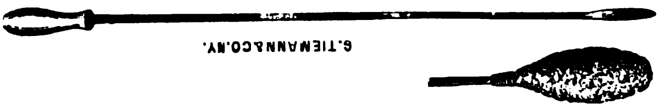


FIG. 291. Uterine Knife.

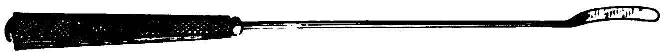


FIG. 292. Probe Pointed Uterine Knife.

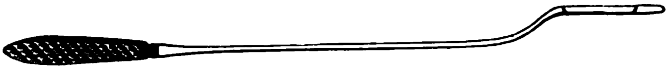


FIG. 293. Gardner's Caustic Holder.

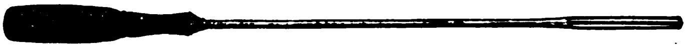


FIG. 294. Sims' Curette.

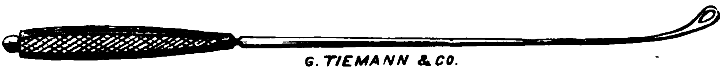


FIG. 295. Siemon's Curette.

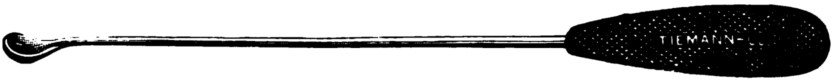
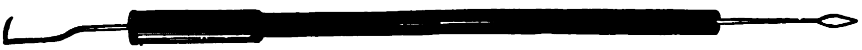


FIG. 296. Buttle's Scarifyer and Tenaculum.



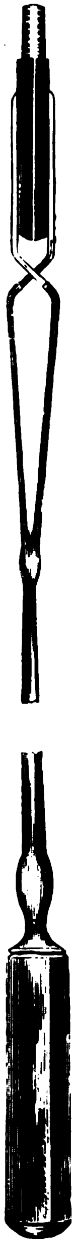


FIG. 297. Edward's Caustic Holder.

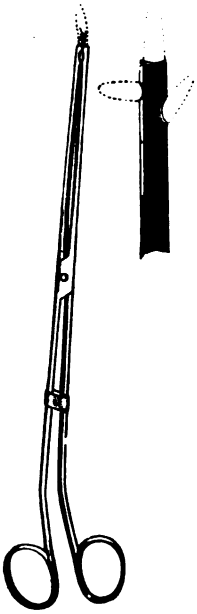


FIG. 298. Gardner's Caustic Forceps.

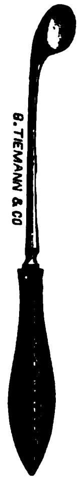


FIG. 299. Siemon's Curette.

GYNÆCOLOGICAL INSTRUMENTS.

Uterine Sounds and Elevators.

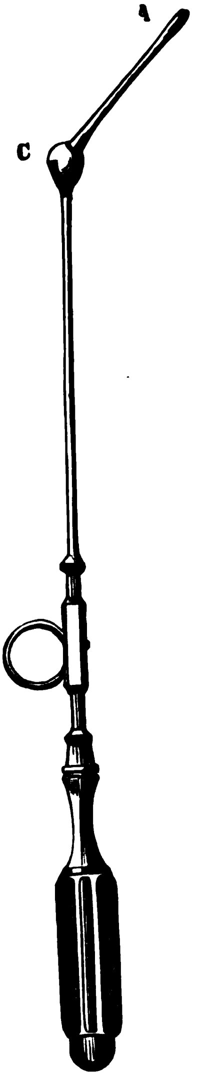


FIG. 300. Sims' Uterine Elevator, No. 1.

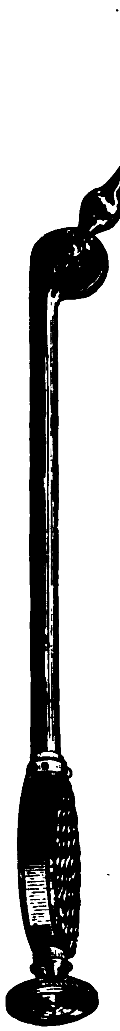


FIG. 301. Gardner's Manifold Instrument.

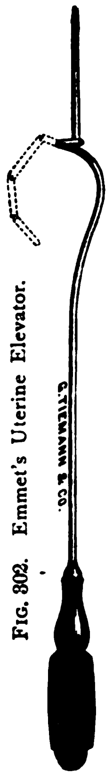


FIG. 302. Emmet's Uterine Elevator.

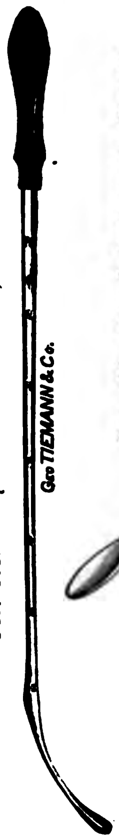


FIG. 303. Simpson's Uterine Sound, Graduated.

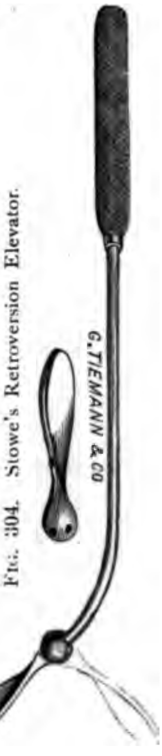


FIG. 304. Stowe's Retroversion Elevator.

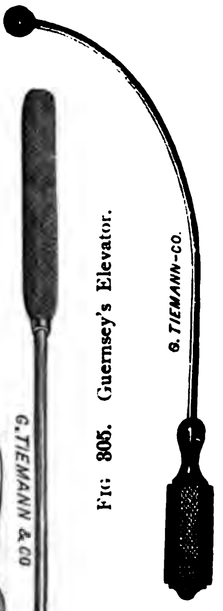


FIG. 305. Guernsey's Elevator.

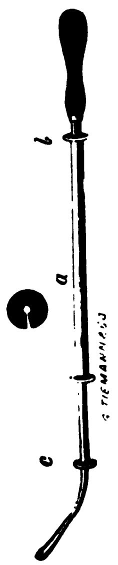
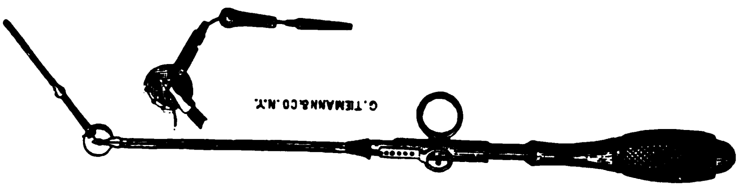


FIG. 306. Skene's Uterine Sound.

FIG. 307. Noeggerath's Uterine Elevator.



GYNÆCOLOGICAL INSTRUMENTS.

Uterine Sounds, Probes and Redressors.

FIG. 308. Sponge Tent Expeller.

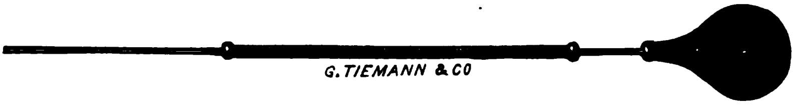


FIG. 309. Lente's Platina Cup.

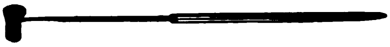


FIG. 310. Lente's Double Bulb Caustic Probe.

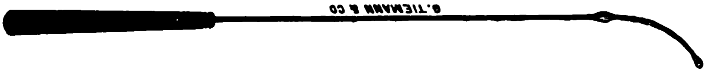


FIG. 311. Sliding Uterine Sound.

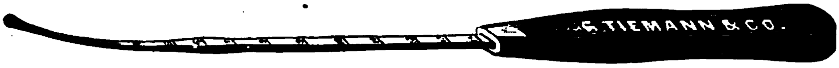


FIG. 312. Hunter's Uterine Sound.

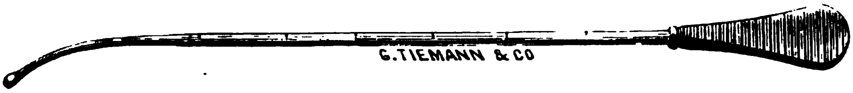


FIG. 313. Gidding's Uterine Sound.

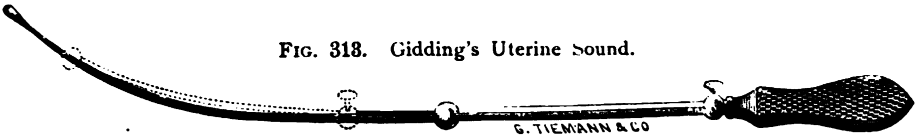


FIG. 314. Folding Uterine Sound.

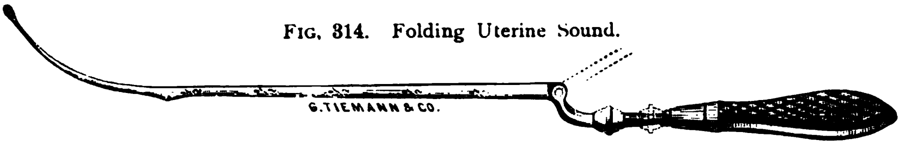


FIG. 315. Elliott's Uterine Sound.

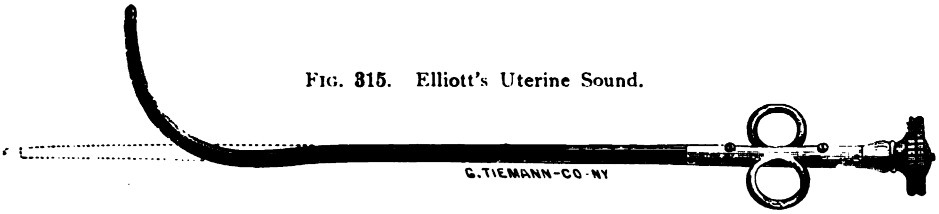
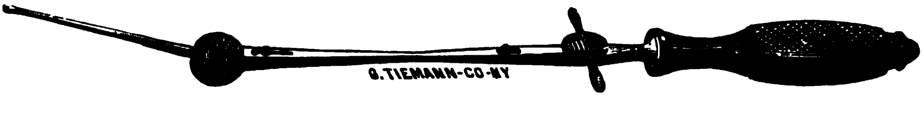


FIG. 316. Sims' Uterine Redresser, No. 2.



GYNÆCOLOGICAL INSTRUMENTS.

Uterine Sounds and Dilators.

FIG. 317. Sims' Uterine Dilator.

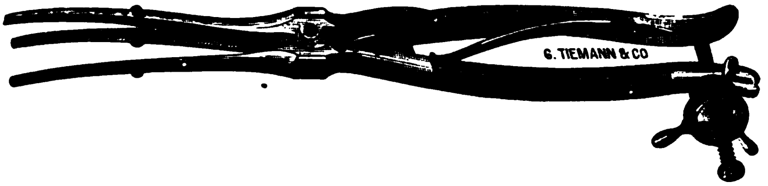


FIG. 317b. Wackerhagen's Applicator.

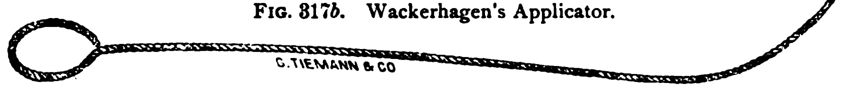


FIG. 318. Barnes' Dilators.

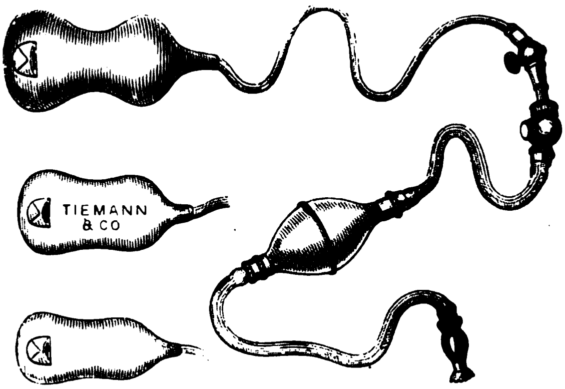


FIG. 319. Sponge Tents.

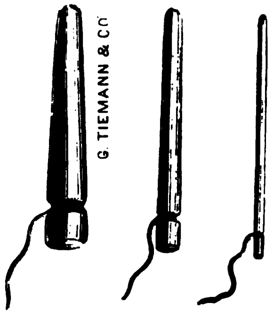


FIG. 320. Simpson's Uterine Dilators.

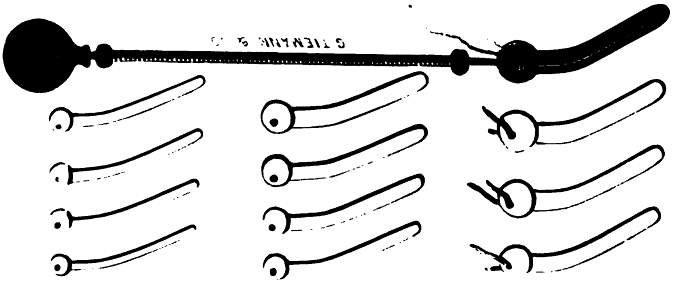


FIG. 322b. Peaslee's Uterine Dilators.

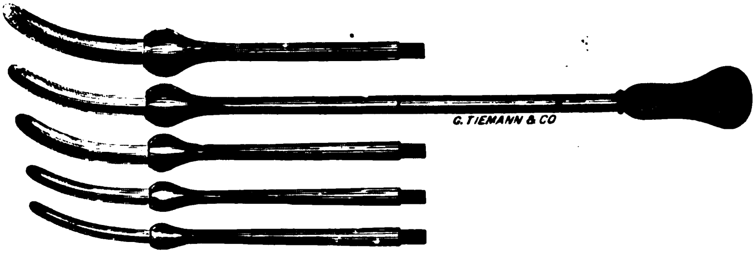


FIG. 321. Hank's Uterine Dilators.

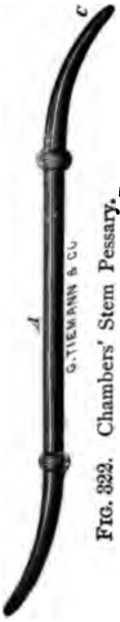
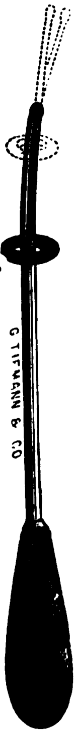


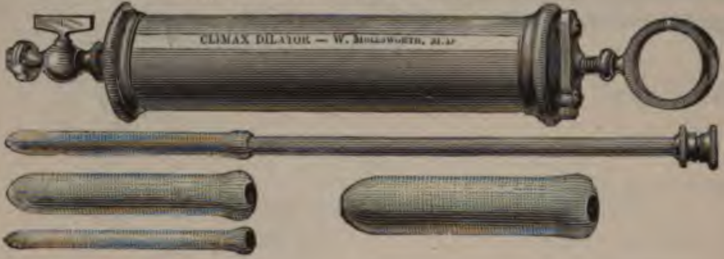
FIG. 322. Chambers' Stem Pessary.



GYNÆCOLOGICAL INSTRUMENTS.

For Dilatation of the Cervix Uteri.

FIG. 323. Climax Uterine Dilator.



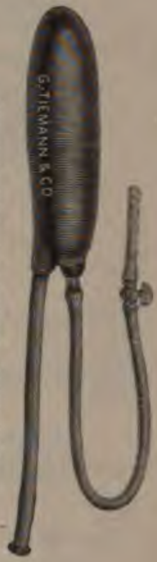
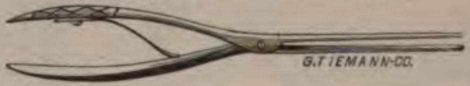


FIG. 323*b*. Emmett's Uterine Dilator.

FIG. 324. Thomas' Dilating Forceps, for separating the bladder and vagina.



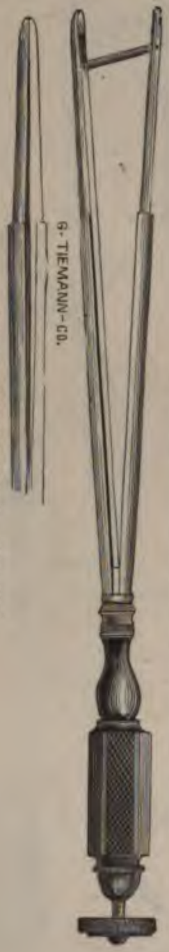


FIG. 325. Ball's Uterine Dilator.

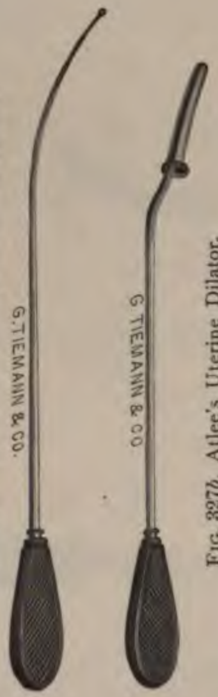


FIG. 327. Wylie's Cervical Speculum and Probe.

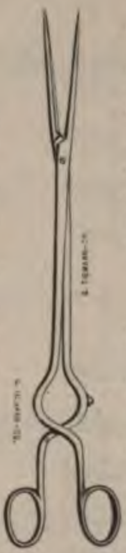


FIG. 327*b*. Atlee's Uterine Dilator.

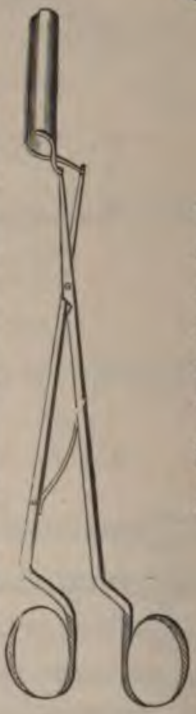


FIG. 328. Tiemann & Co.'s Intra Uterine Speculum.

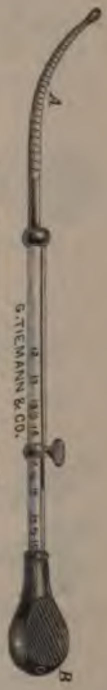


FIG. 329. Jenk's Uterine Sound.

GYNÆCOLOGICAL INSTRUMENTS.

For Dilatation of the Cervix Uteri.

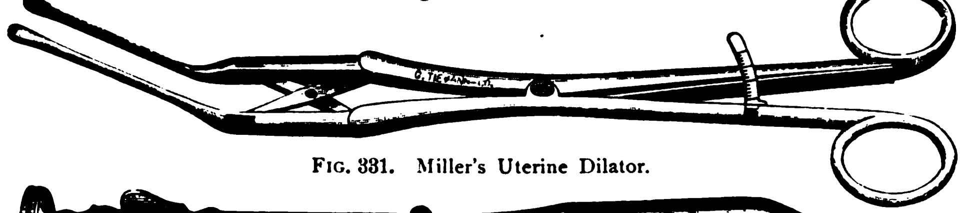

G. TIEMANN & CO.

FIG. 330. Ellinger's Uterine Dilator.

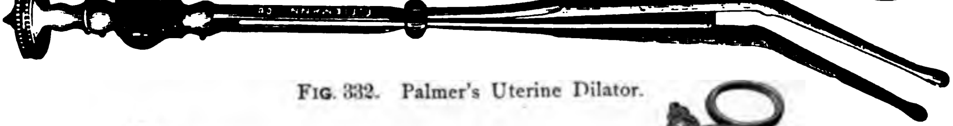


FIG. 331. Miller's Uterine Dilator.

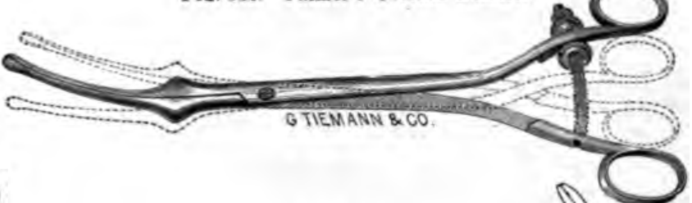

G. TIEMANN & CO.

FIG. 332. Palmer's Uterine Dilator.

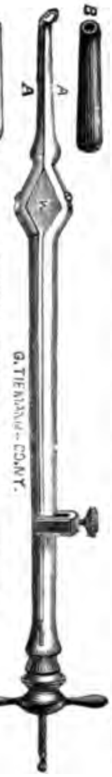


FIG. 332b. Hunter's Uterine Dilator.

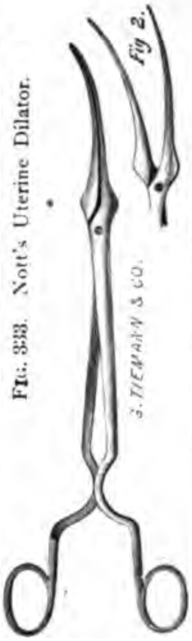


Fig 2.
G. TIEMANN & CO.

FIG. 333. Nott's Uterine Dilator.

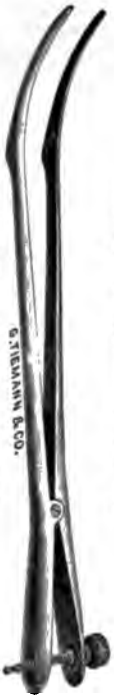

G. TIEMANN & CO.

FIG. 334. White's Uterine Dilator.

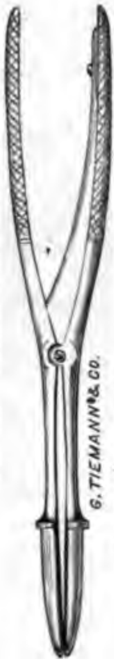

G. TIEMANN & CO.

FIG. 335. Thomas' Uterine Dilator.

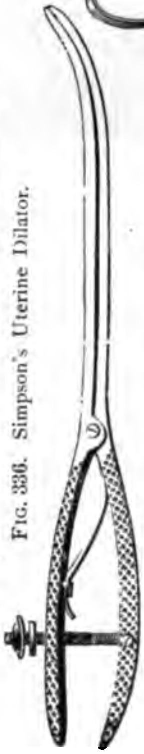


FIG. 336. Simpson's Uterine Dilator.

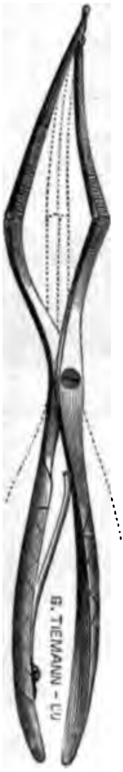

G. TIEMANN - CO.

FIG. 337. Vanderveer's Uterine Dilator.

GYNÆCOLOGICAL INSTRUMENTS.

For Division of the Cervix Uteri and for Scarifying.

FIG. 338. Chapman's Uterine Scarificator (Pocket).

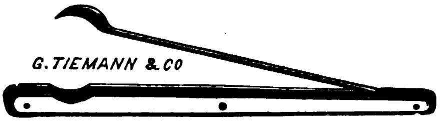


FIG. 339. Buttle's Scarificator.

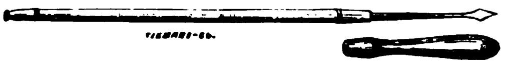


FIG. 340. White's Hysterotome.

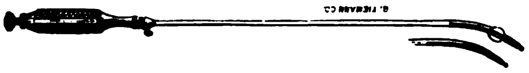


FIG. 341. Stohlmann's Hysterotome.

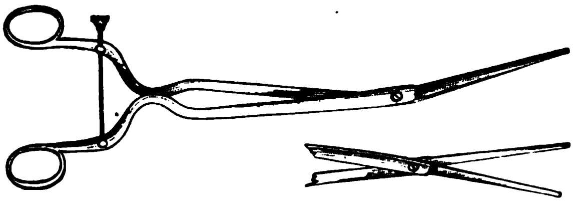


FIG. 342. Sims' Rotating Knife.

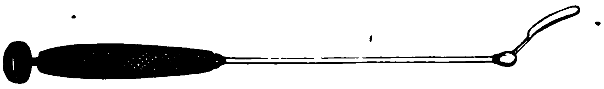
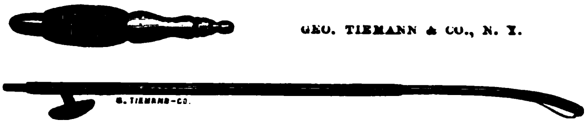


FIG. 343. Storer's Uterine Scarificator.



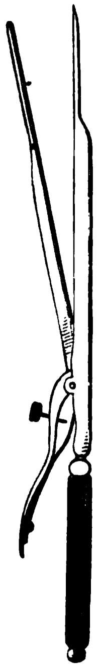


FIG. 344. Simpson's Hysterotome.

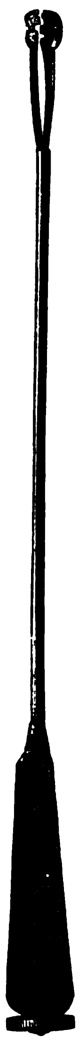
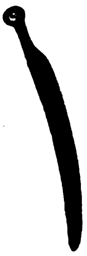


FIG. 345. Emmet's Uterine Knife.



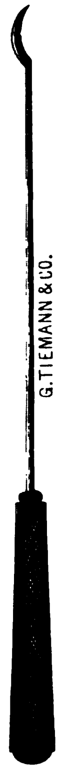


FIG. 348. Chapman's Uterine Scarificator.

FIG. 346. Skene's Sound and Scarificator.

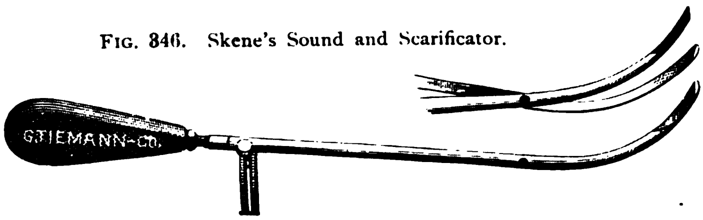
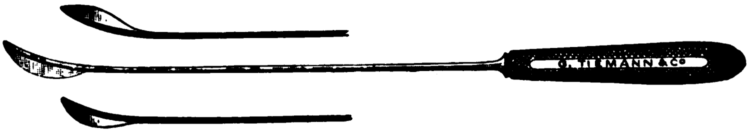


FIG. 347. Laennek's Uterine Knives.



GYNÆCOLOGICAL INSTRUMENTS.

For Division of the Cervix-Uteri and for Scarifying.

FIG. 349. Curved Scissors for the Amputation of the Cervix.

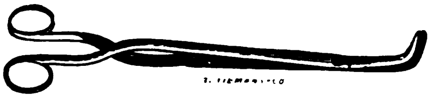


FIG. 350. Clark's Tooth-Edged Scissors.

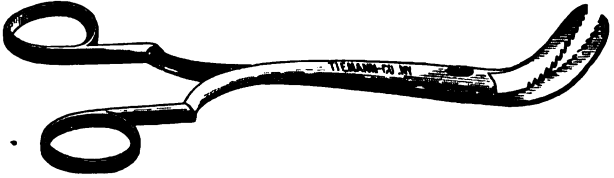


FIG. 351. Thomas' Punching Forceps.

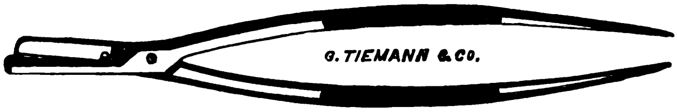


FIG. 352. Peaslee's Uterotome.

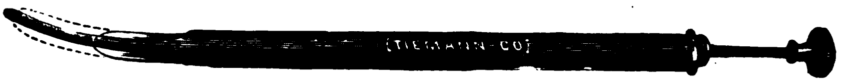


FIG. 353. Kuechenmeister's Scissors.

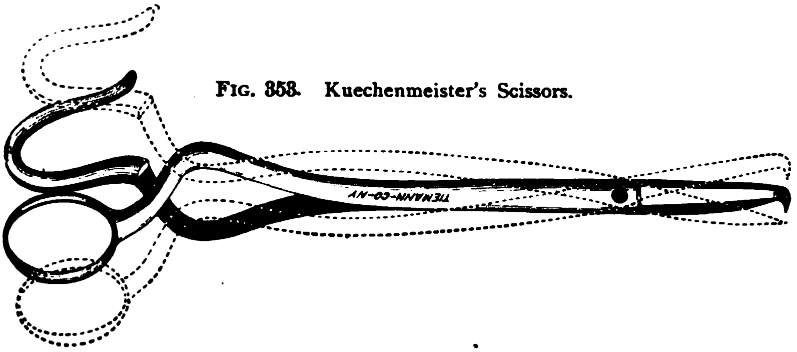


FIG. 354. Sims' Knife-Holder and four Knives.

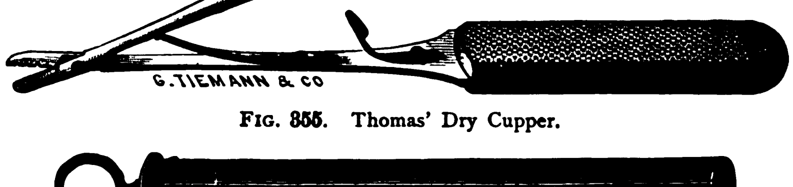
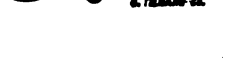


FIG. 355. Thomas' Dry Cupper.



GYNÆCOLOGICAL INSTRUMENTS.

For Injection of the Vagina and Uterine Cavity.

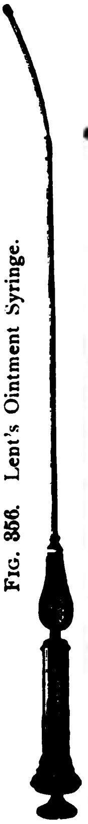


FIG. 356. Lent's Ointment Syringe.

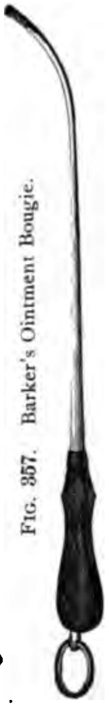


FIG. 357. Barker's Ointment Bougie.

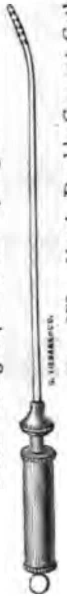


FIG. 358. Long Pipe Uterine Syringe.

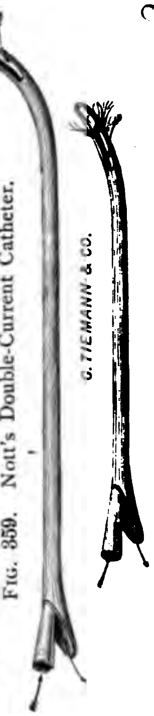


FIG. 359. Nott's Double-Current Catheter.

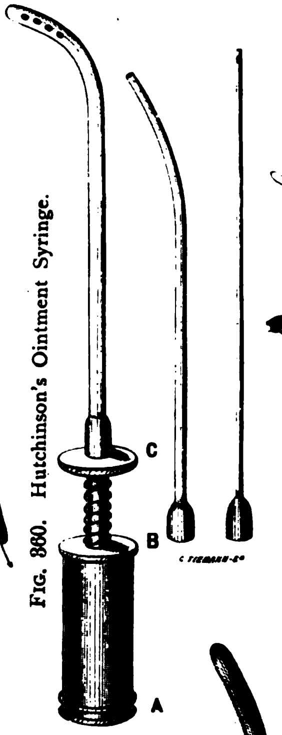


FIG. 360. Hutchinson's Ointment Syringe.

FIG. 361
Davidson's Syringe.

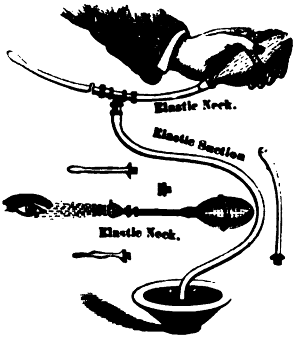
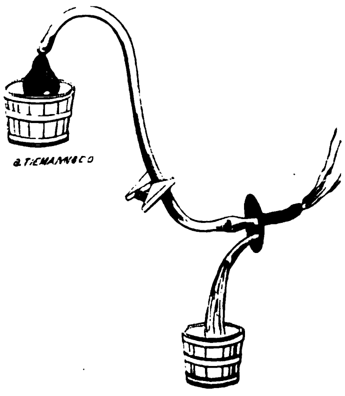


FIG. 362. Syphon Syringe for the Vagina.



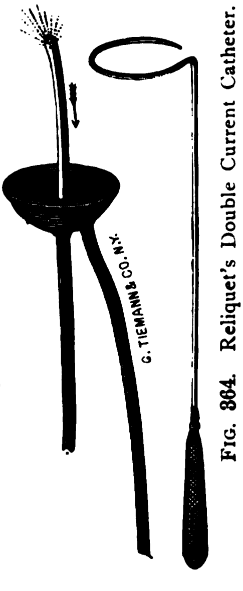


FIG. 363. Byrne's Reflux Cathoter and Adjuster.

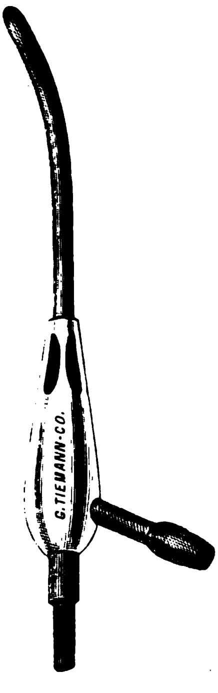


FIG. 364. Reliquet's Double Current Catheter.

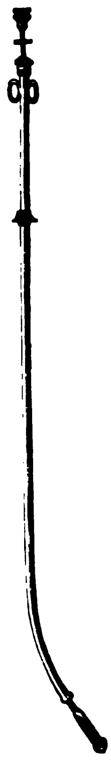


FIG 365. Lallemand's Port Caustique.

GYNÆCOLOGICAL INSTRUMENTS.

For Injection of the Vagina and Uterine Cavity.

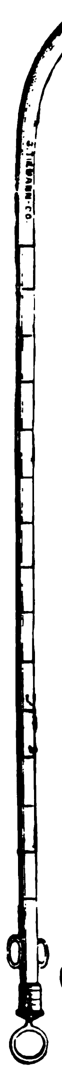


FIG. 366. Parker's Caustic Syringe.

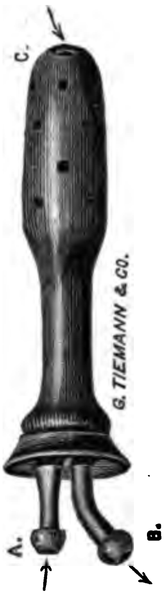


FIG. 367. Bodenhamer's Rectal and Vaginal Irrigator.

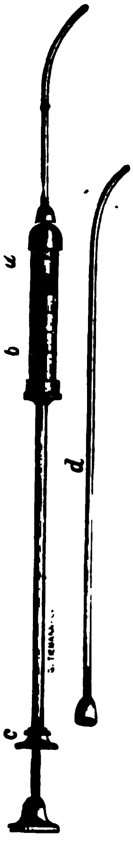


FIG. 368. Lent's Ointment Syringe.

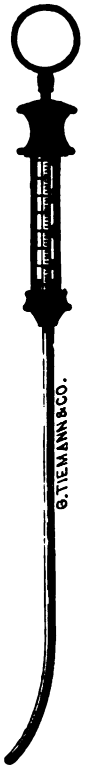


FIG. 369. Braun's Uterine Syringe.

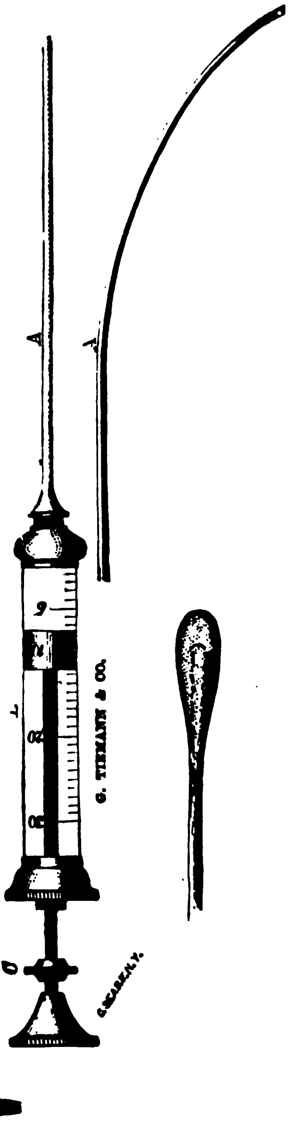
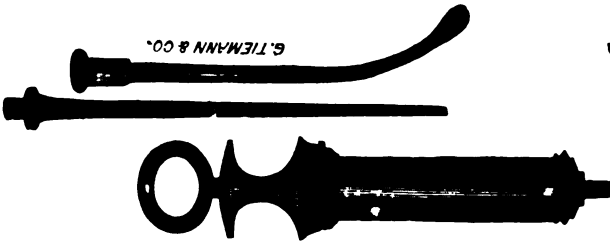


FIG. 370. Lawson's Applicator.

FIG. 371. Nott's Hard Rubber Uterine Syringe.



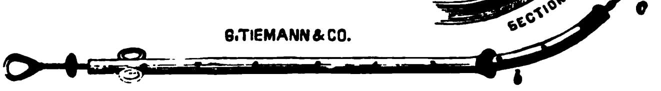
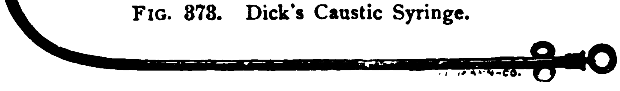


FIG. 372. Nott's Applicator.

FIG. 373. Dick's Caustic Syringe.



GYNÆCOLOGICAL INSTRUMENTS.

For Injecton of the Vagina and Uterine Cavity.

FIG. 874. Maw's Enema Pump.

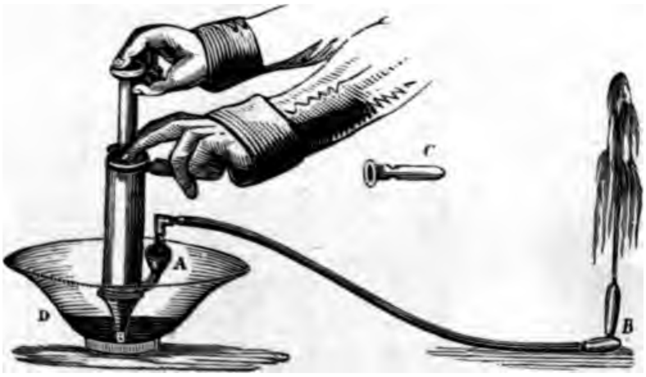


FIG. 875. Woodward's Uterine Syphon Douche.

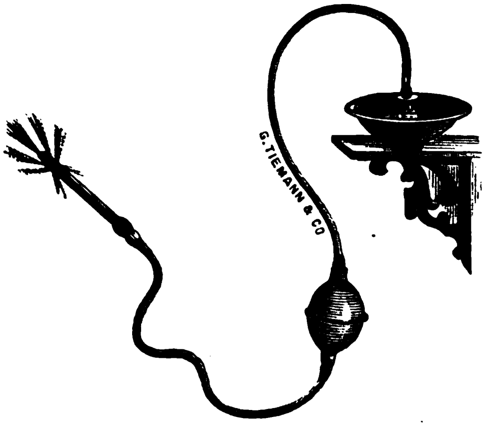


FIG. 376. Clay's Powder Insufflator.

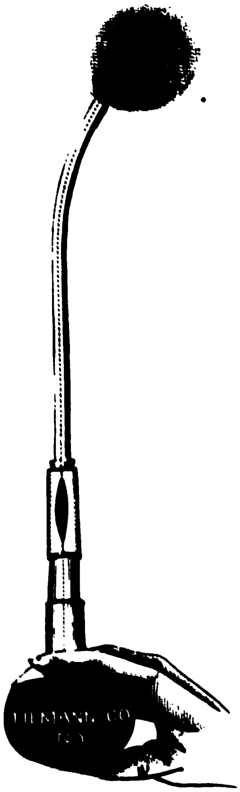
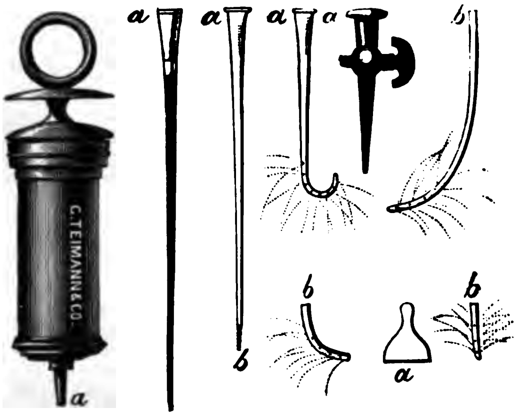


FIG. 377. Tiemann & Co.'s Universal Syringe.



Also, Rubber Bag Syringes, French Irrigateurs, etc.

GYNÆCOLOGICAL INSTRUMENTS.

For Displacements of the Uterus.

FIG. 878. White's

UTERINE REPOSITOR.

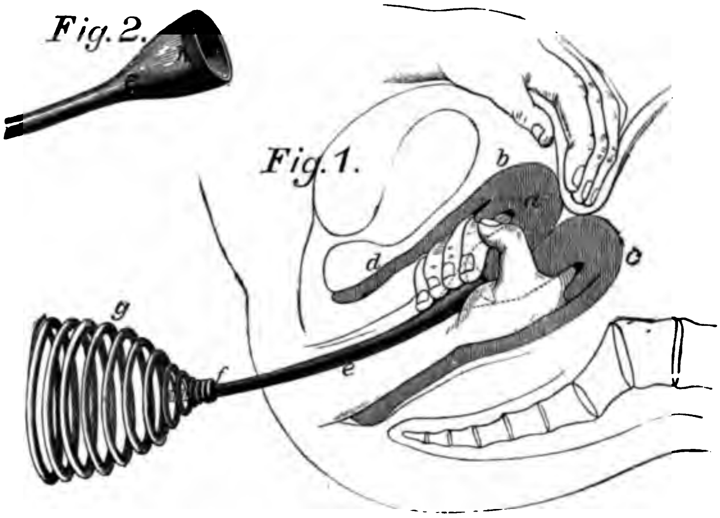


Fig. 1.

- *a.* Uterus in process of reduction.
- *b.* Anterior lip or wall of the uterus with the fingers of the left hand pressing upon it and assisting in pulling open the uterine cavity.
- *c.* Posterior uterine wall semi-reflected.
- *d.* Anterior vaginal wall.
- *e.* Wooden or hard rubber stem of Repositor, its enlarged extremity held in contact with the fundus by the intra-vaginal hand of the operator.
- *f.* Distal extremity of stem made into a screw, so as to fasten into *g*, a coil of No. 11 steel spring wire, requiring eight or ten pounds pressure by the breast of the operator, against which it is placed, to bring it down.

Fig. 2.

- *h.* Uterine extremity of stem *e*, which is terminated with a soft india rubber disc 1⅜-inch diameter, the concavity into which the fundus is received being about one-half inch deep, with its terminal margin thin and soft.

GYNÆCOLOGICAL INSTRUMENTS.

For Displacements of the Uterus.

FIG. 379. Hornby's Pessary.

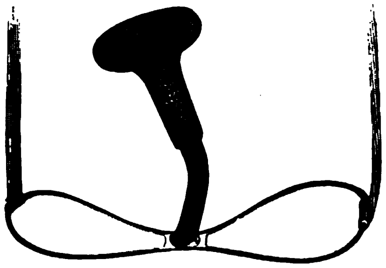


FIG. 380. Tiemann & Co.'s Uterine Supporter

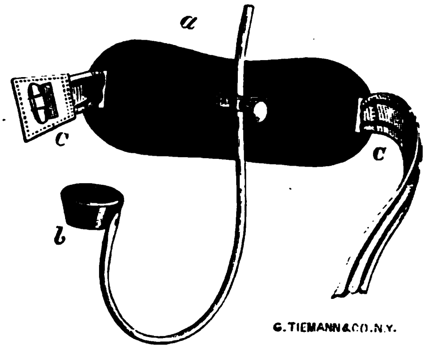


FIG 381.
Babcock's Pessary.

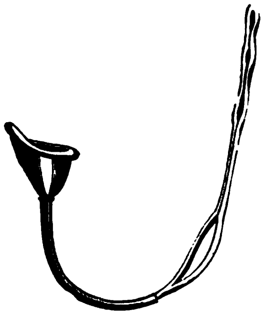


FIG. 382. Davie's Pessary. (1, 2, 3, 4, 5.)

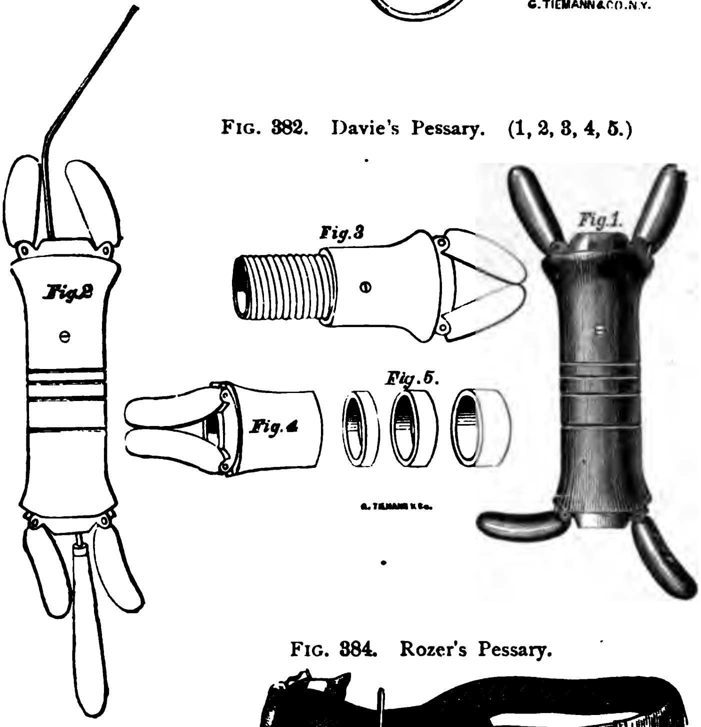


FIG. 383.
Cutter's Pessary.

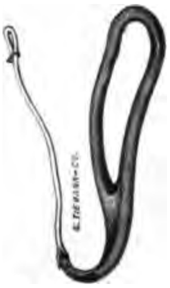
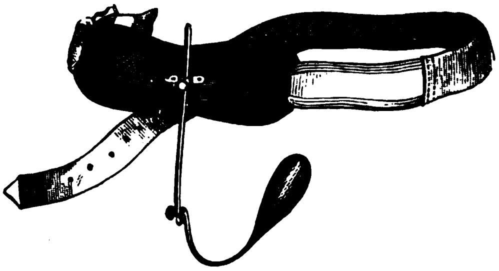


FIG. 384. Rozer's Pessary.



GYNÆCOLOGICAL INSTRUMENTS.

For Displacements of the Uterus.

FIG. 385. Thomas' Anteversion Pessary.

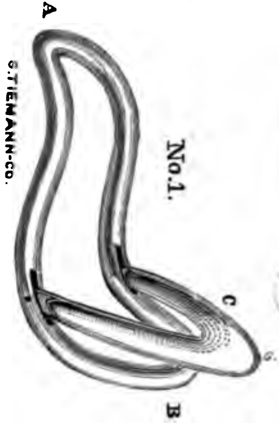


FIG. 386. Thomas' Retroversion Pessary.

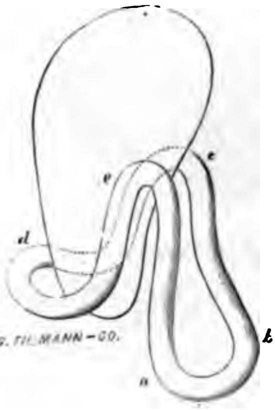


FIG. 387. Smith's Pessary.

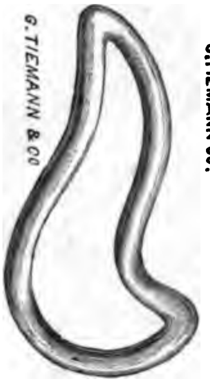


FIG. 388. Thomas' Anteversion Pessary.

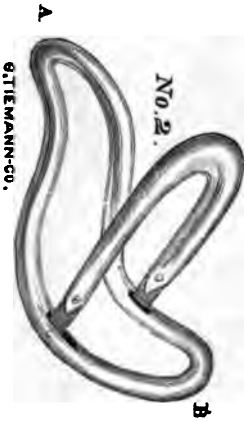


FIG. 389. Thomas' Cutter's Pessary.

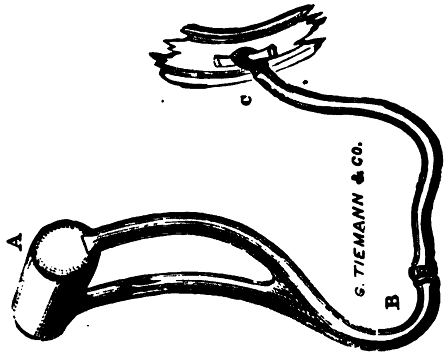


FIG. 390. Thomas' Cutter's Pessary.

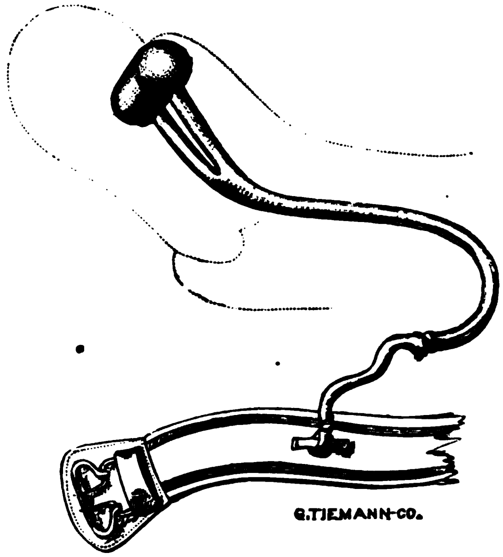


FIG. 391. Side View of Smith's Pessary (387).

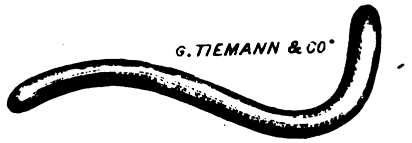
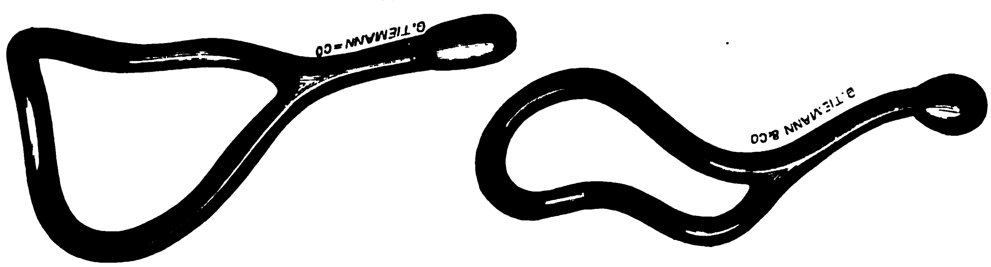


FIG. 392. Chamberlain's Pessaries.



GYNÆCOLOGICAL INSTRUMENTS.

For Displacements of the Uterus.

FIG. 393. Buttles' Pessary.

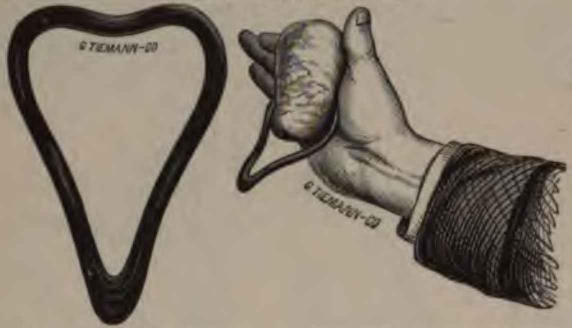


FIG. 394. Nœggerath's Pessary.

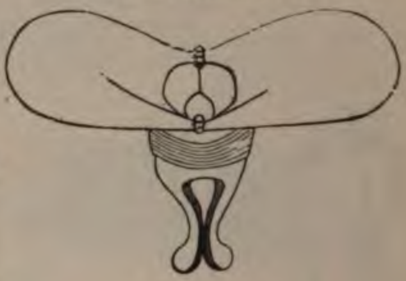


FIG. 395. Ring Pessary.

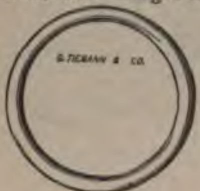

G. TIEMANN & CO.

FIG. 396. Graily Hewitt's Pessary.

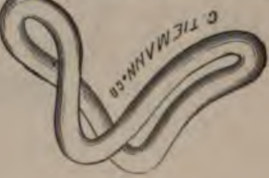


FIG. 397. Sleigh Pessary.

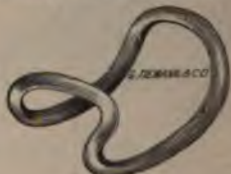


FIG. 400. Zwank's Pessary.

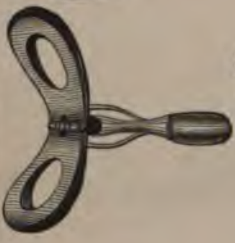


FIG. 403. Buttles' Pessary.

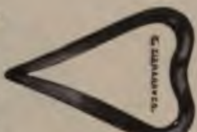


FIG. 404. Globe Pessaries.

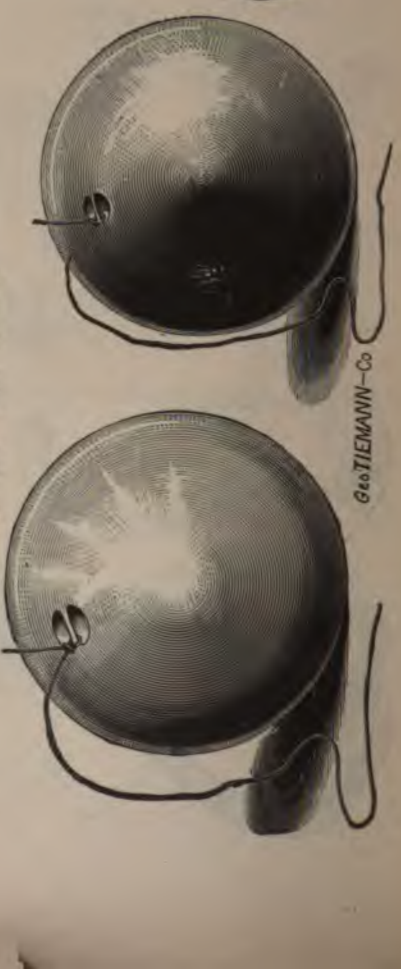


FIG. 399. Hoffman's Pessary.

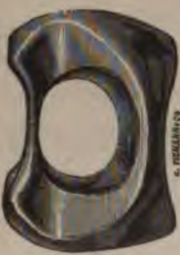


FIG. 402. Hanck's Pessary.

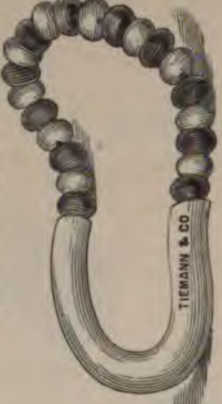


FIG. 398. Frazer's Pessary.

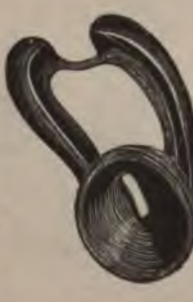
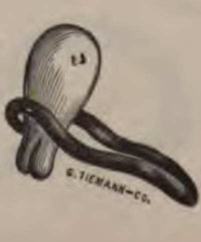


FIG. 401. Buttles' Pessary.


G. TIEMANN-CO.

GYNÆCOLOGICAL INSTRUMENTS.

For Displacements of the Uterus.

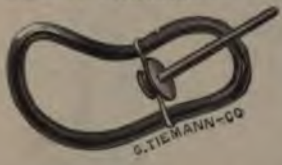


FIG. 405.
Kinloch's Retroflexion Pessary.

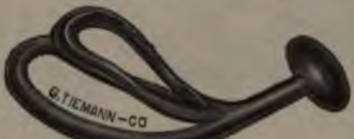


FIG. 406. Kinloch's Pessary for Prolapsus of the Bladder.

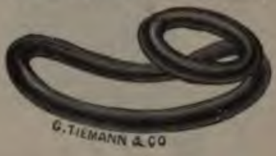


FIG. 407.
Kinloch's Anteversion Pessary.

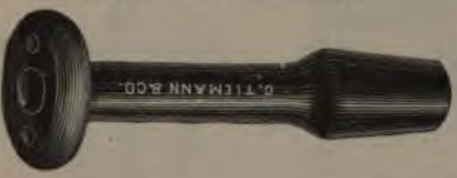

G.TIEMANN & CO.

FIG. 408. Ball's Stem Pessary.

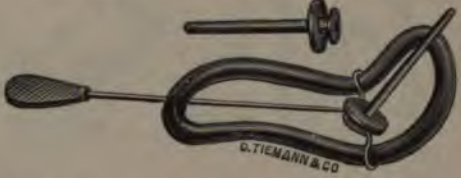


FIG. 409. Kinloch's Retroflexion Pessary.

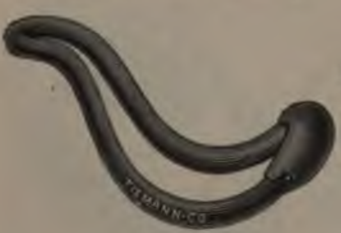


FIG. 410.
Thomas' Retroflexion Pessary.

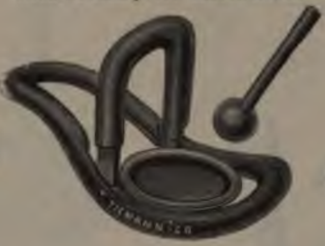


FIG. 411. Thomas' Intra Uterine Stem Pessary for Anteflexion.

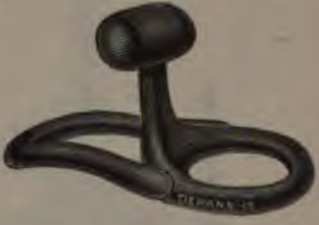


FIG. 412. Thomas' Anteflexion Pessary (open) when in situ.

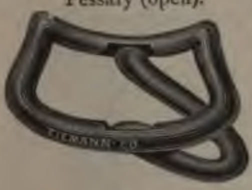


FIG. 413.
Thomas' Antiversion Pessary (open).

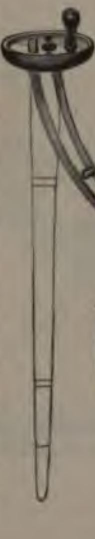


FIG. 417. Perry's Instrument for Flexion of the Uterus.

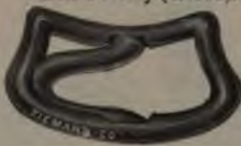


FIG. 414. Thomas' Anteversion Pessary (closed).

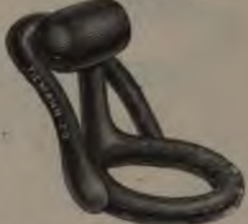


FIG. 415. Thomas' Anteflexion Pessary (closed).

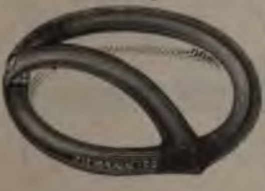


FIG. 416.
Hitchcock's Anteversion Pessary.

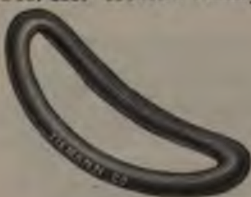


FIG. 418. Hewitt's Pessary.

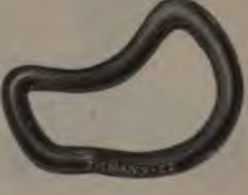


FIG. 419. Hodge's Closed Lever Pessary.

GYNÆCOLOGICAL INSTRUMENTS.

For Displacements of the Uterus.

FIG. 420.
Braun's Colpeurynter.

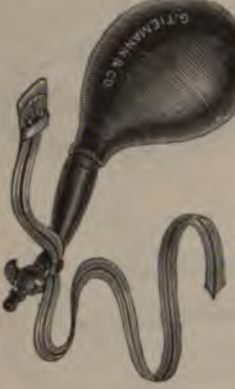


FIG. 420*b*. Trask's Pessary.

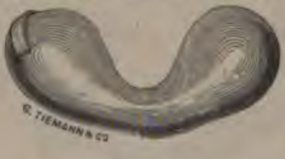


FIG. 420*c*. Trask's Pessary.

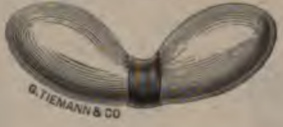


FIG. 421 Coxeter's Stem Pessary.

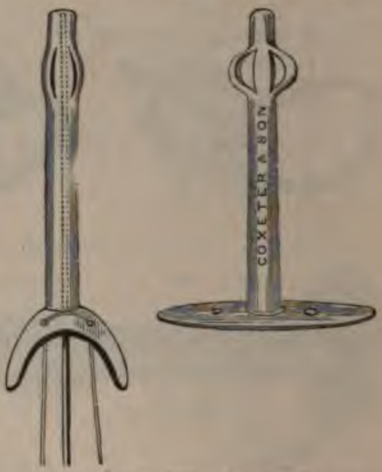


FIG. 422. Conant's Intra Uterine Stem Pessary.

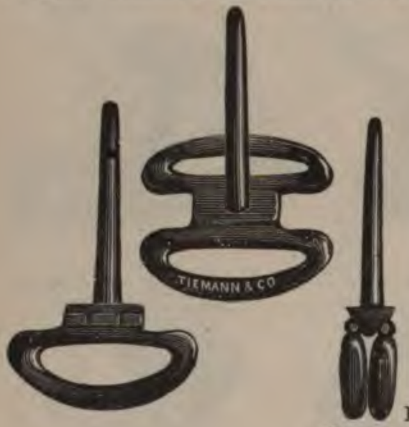


FIG. 424.
Thomas' Galvanic Stem
Pessary.

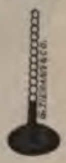


FIG. 423. Hurd's Pessary.

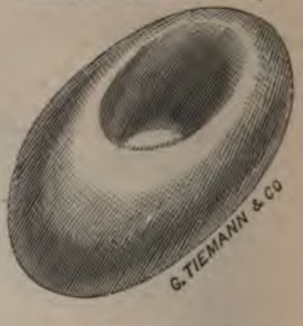


FIG. 425. Stem Pessaries

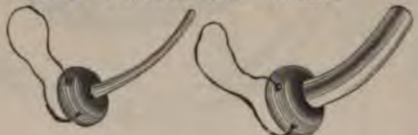


FIG. 426. Sponge Tents.

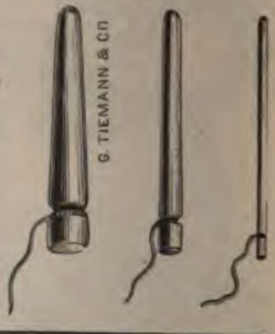
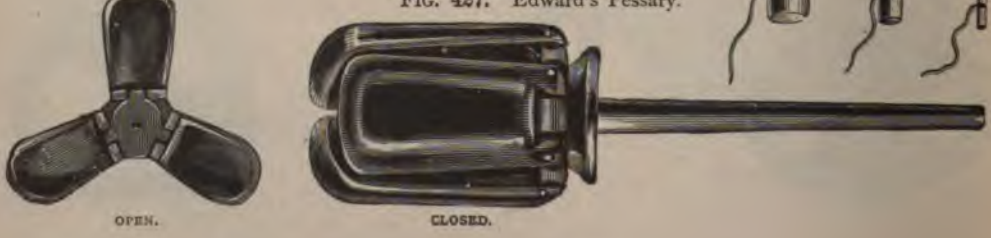


FIG. 427. Edward's Pessary.



GYNÆCOLOGICAL INSTRUMENTS.

For Displacements of the Uterus.

FIG. 428.
Stem Pessary.

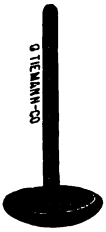


FIG. 428*b*.
Weber's Pessary.

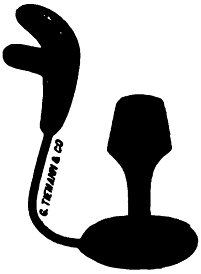


FIG. 428*c*. Cutter's Ring Pessary.

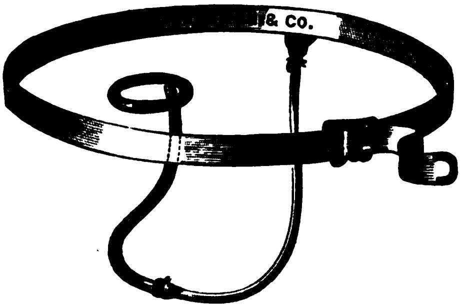


FIG. 429. Graily Hewitt's Pessary.

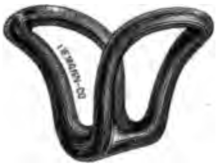


FIG. 430. Peaslee's Stem Pessary.

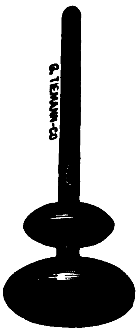


FIG. 431. O'Leary's Pessary.

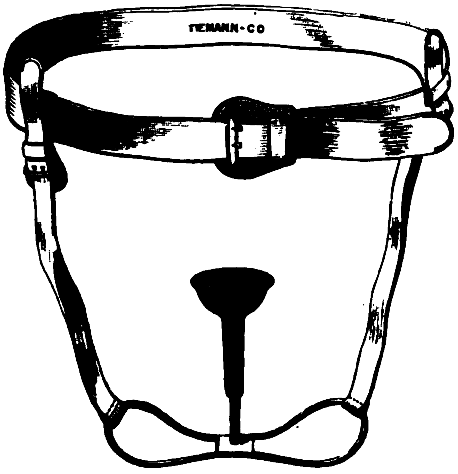


FIG. 429*b*. Hodge's Horse-shoe Pessary.

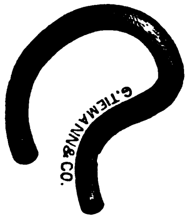


FIG. 431*b*. Thomas' Anteversion Pessary.

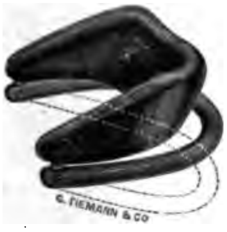


FIG. 431*c*. Fowler's Pessary.

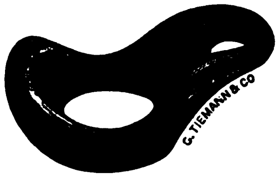


FIG. 431*d*. Skeene's Urinal Cup Pessary.

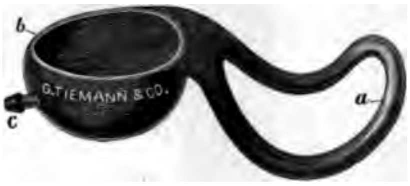
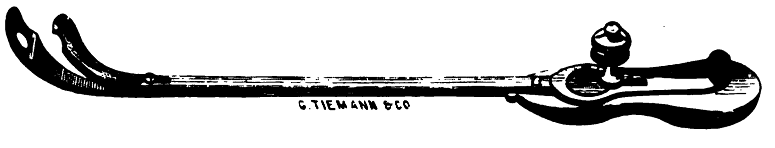


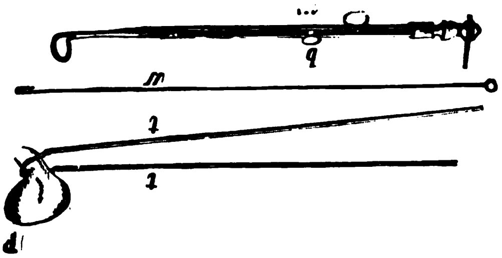
FIG. 432. Sims' Pessary Introducer.



GYNÆCOLOGICAL INSTRUMENTS.

For Uterine and Ovarian Tumors.

FIG. 433. Van Buren's Ligator.



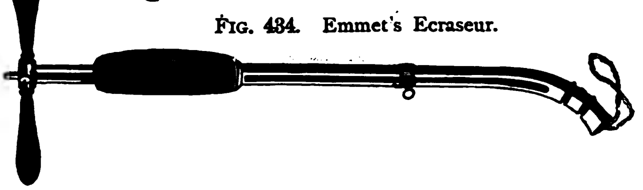


FIG. 434. Emmet's Ecraseur.

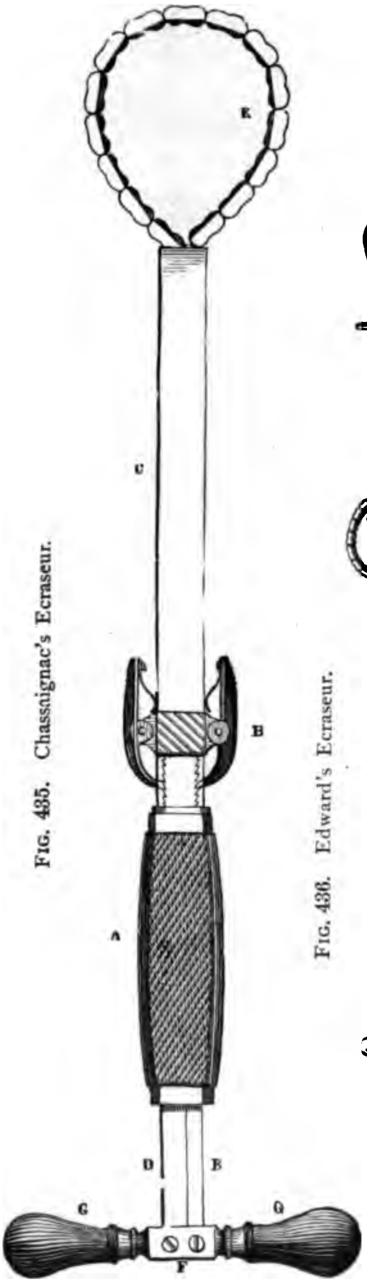


FIG. 435. Chassaignac's Ecraseur.

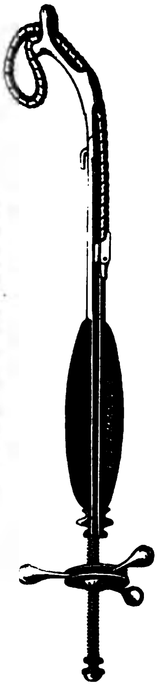


FIG. 436. Edward's Ecraseur.

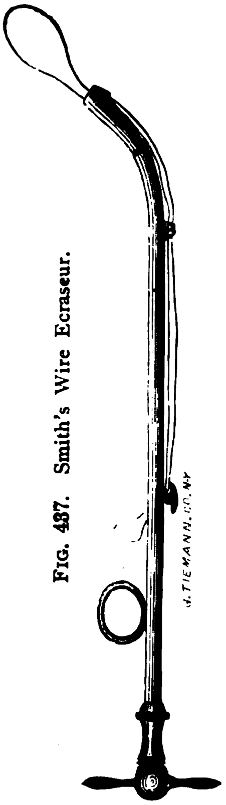


FIG. 437. Smith's Wire Ecraseur.

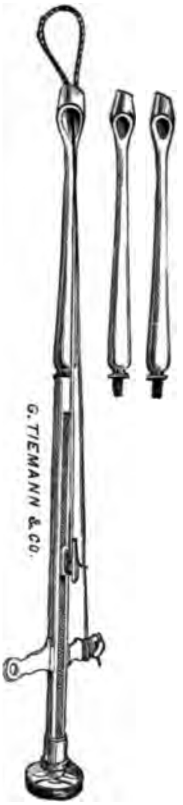


FIG. 438. Braxton Hick's Wire Ecraseur

GYNÆCOLOGICAL INSTRUMENTS.

For Uterine and Ovarian Tumors.

FIG. 438*b*. Braxton Hick's Ecraseur.

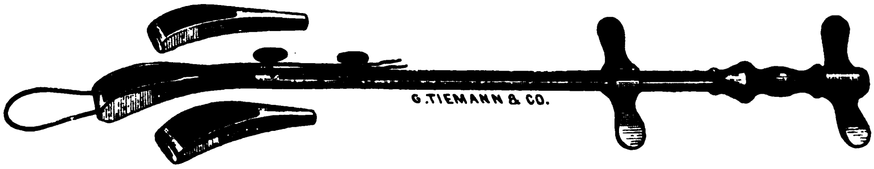


FIG. 438*c*. Smith's Wire Ecraseur.

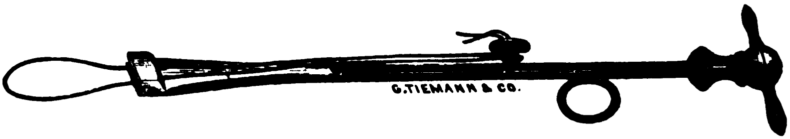


FIG. 438*d*. Barnes' Wire Ecraseur.

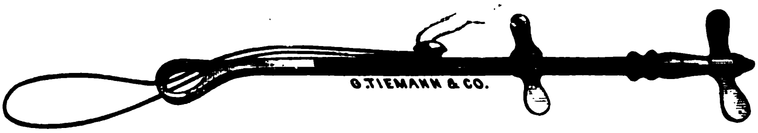


FIG. 438*e*. Tiemann's Long Chain Ecraseur.

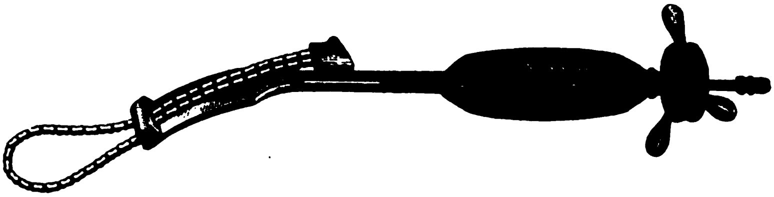


FIG. 438*f*. Cintrat's Ligator.

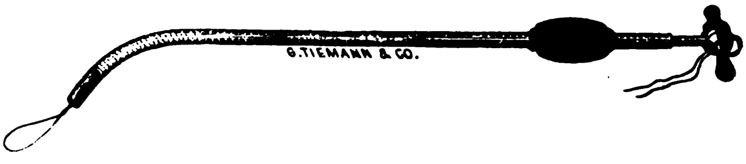
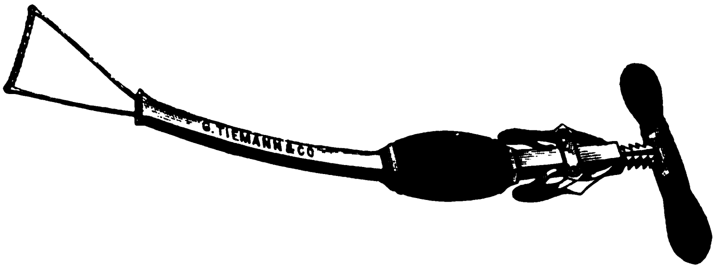


FIG. 438*g*. Thompson's Ecraseur.



Sim's Port Chain Ecraseur, fig. 470. Ligators for Hæmorrhoidal Tumors, page 122, Part III

GYNÆCOLOGICAL INSTRUMENTS.

For Uterine and Ovarian Tumors.

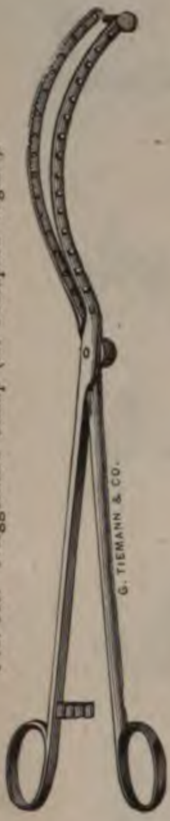


FIG. 440. Nœggerath's Clamp (for Prolapsed Vaginæ).

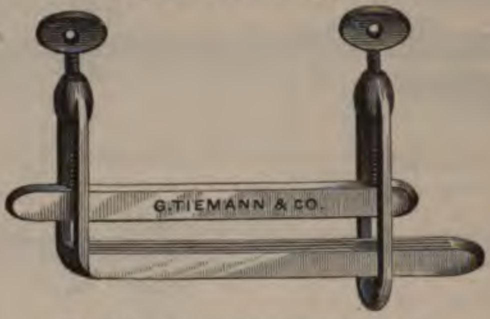


FIG. 439. Gueride's Clamp.

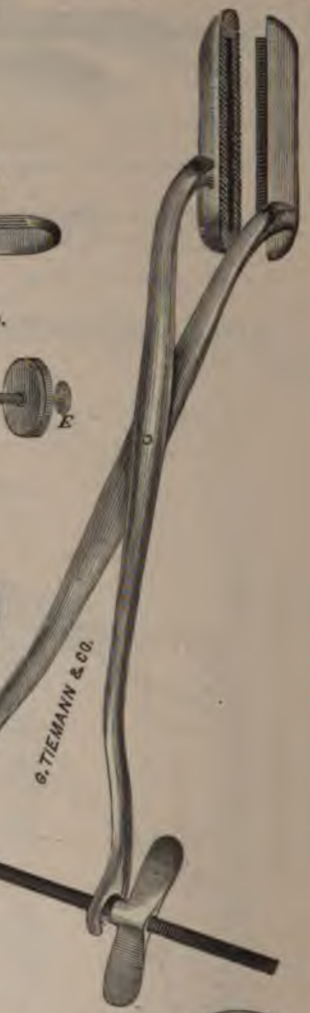


FIG. 442. Nott's Rectilinear Ecraseur.

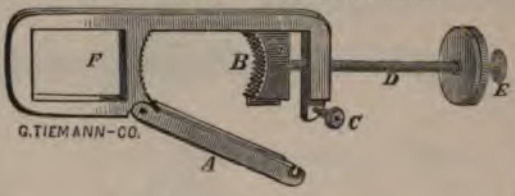


FIG. 441. Dawson's Clamp (modified).

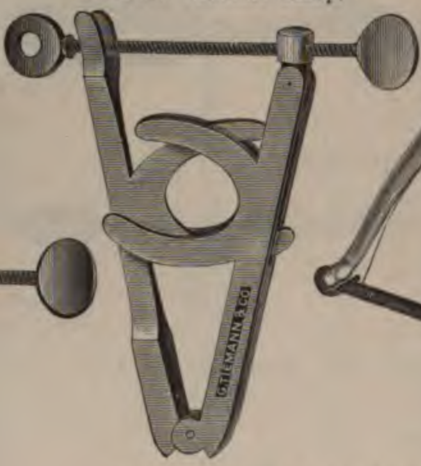


FIG. 443. Thomas' Clamp.

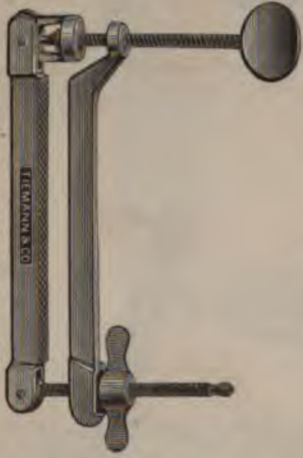


FIG. 444. Spencer Well's Clamp.

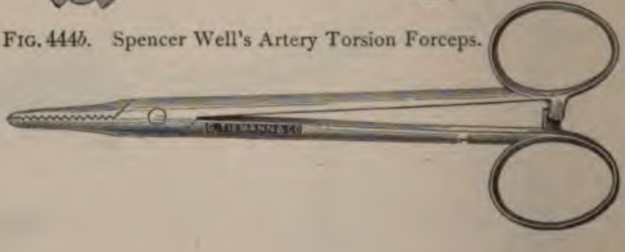


FIG. 444*b*. Spencer Well's Artery Torsion Forceps.

GYNÆCOLOGICAL INSTRUMENTS.

For Uterine and Ovarian Tumors.

FIG. 445. Spencer Well's Pedicle Clamps.
Consisting of 3 clamps, 1 set of levers for closing and 1 set for removing them.

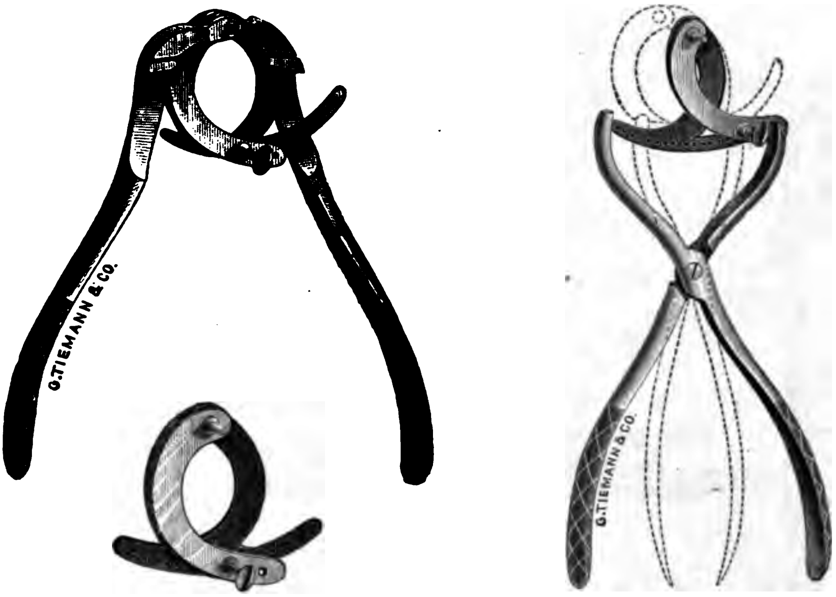


FIG. 445*b*. Byford's Clamps.
Consisting of 2 clamps and 1 pair of lever forceps.

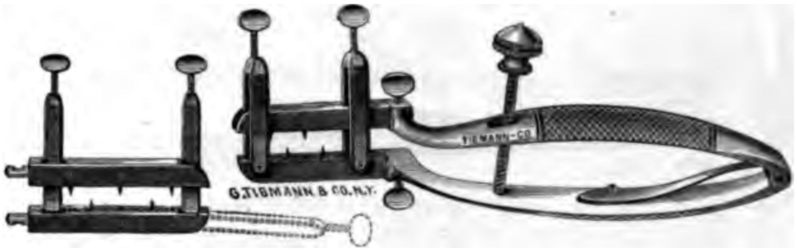
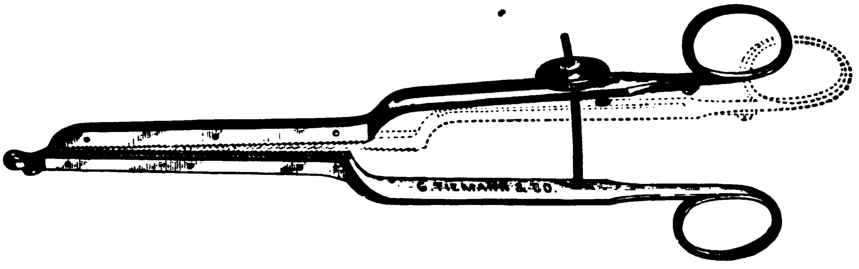


FIG. 446. Darby's Clamps.



GYNÆCOLOGICAL INSTRUMENTS.

For Uterine and Ovarian Tumors.

FIG. 447. Atlee's Clamp.

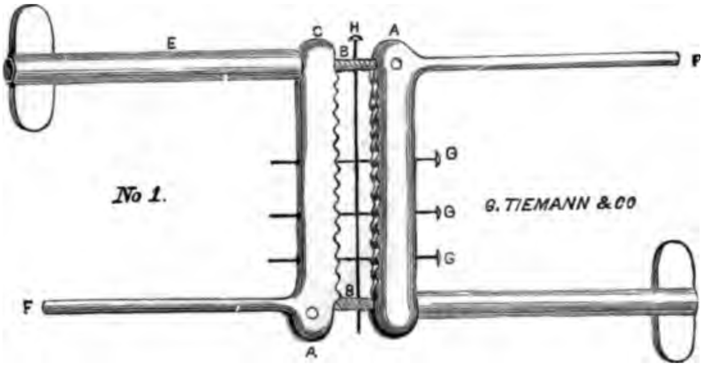


FIG. 447d. Thomas' Tissue Forceps.

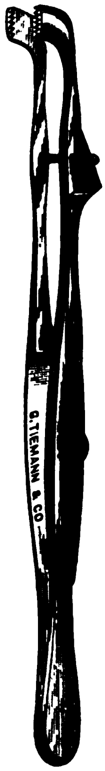


FIG. 447b. Spencer Well's Clamp Forceps.

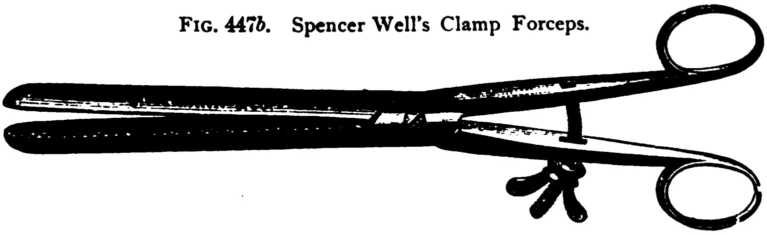


FIG. 447c. Thomas' Sac Forceps.

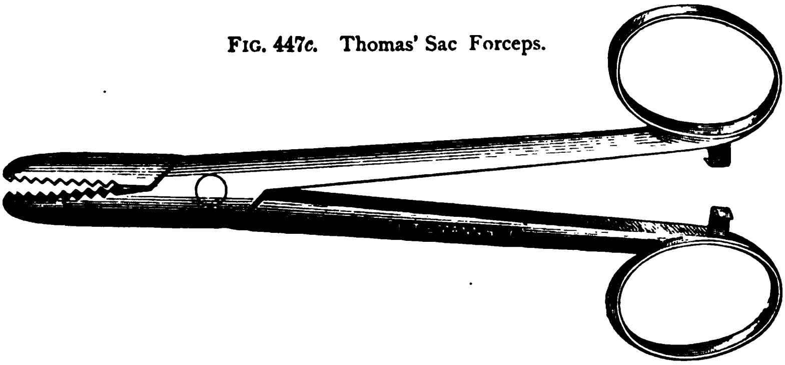
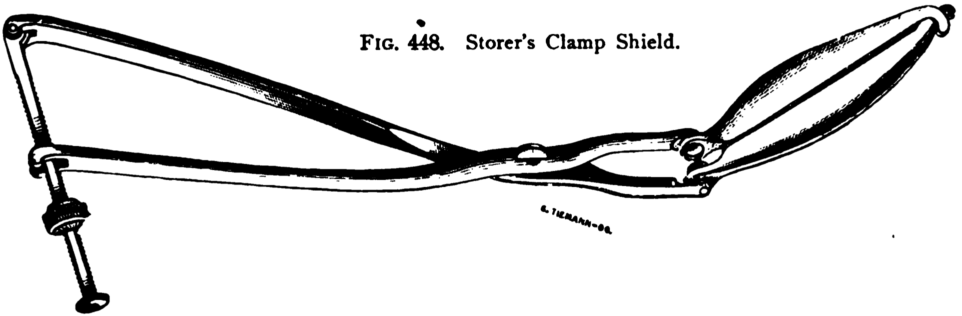


FIG. 448. Storer's Clamp Shield.



GYNÆCOLOGICAL INSTRUMENTS.

For Uterine and Ovarian Tumors.

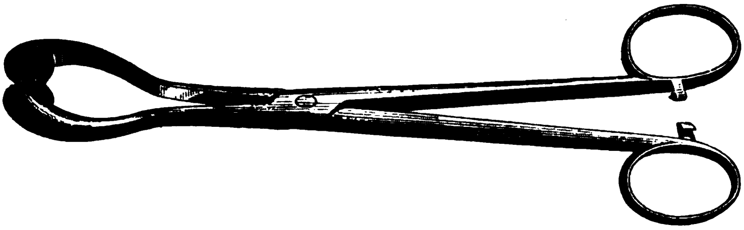


FIG. 449. Spencer Well's Sac Forceps.

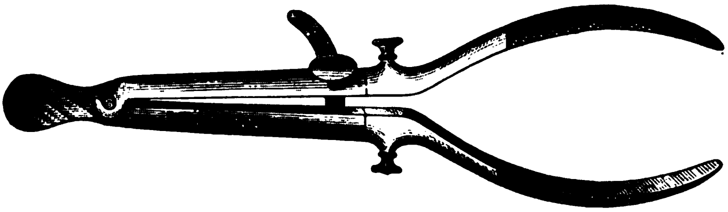


FIG. 450. Baker Brown's Clamp.

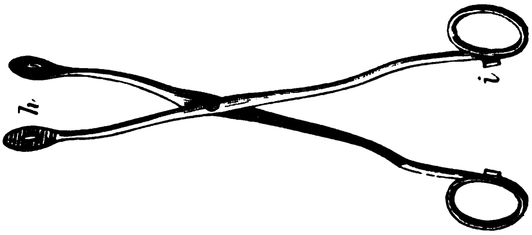


FIG. 451. Nelaton's Tumor Forceps.

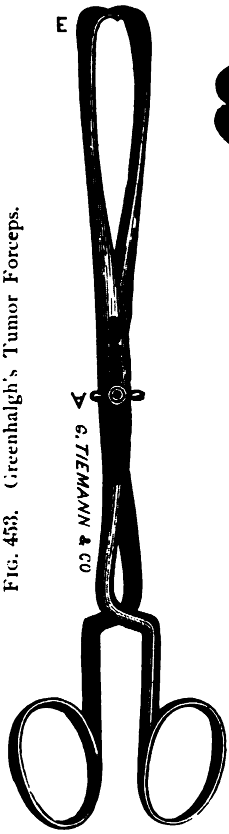


FIG. 453. Greenhalgh's Tumor Forceps.

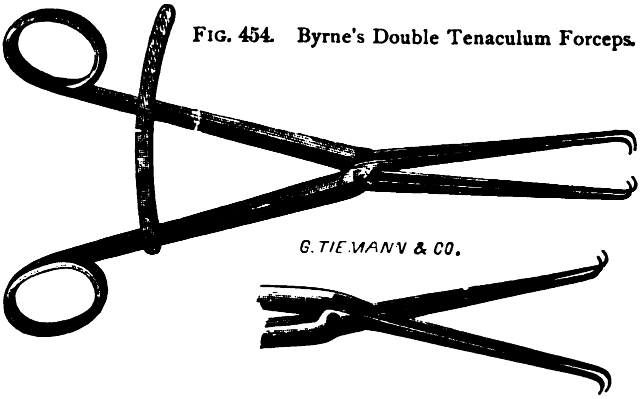


FIG. 454. Byrne's Double Tenaculum Forceps.

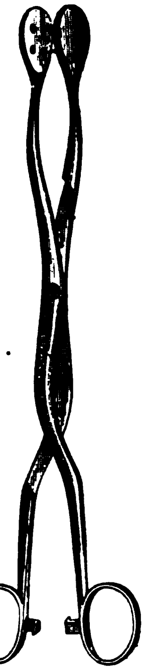


FIG. 452. Nelaton's Pedicle Forceps.

GYNÆCOLOGICAL INSTRUMENTS.

For Uterine and Ovarian Tumors.

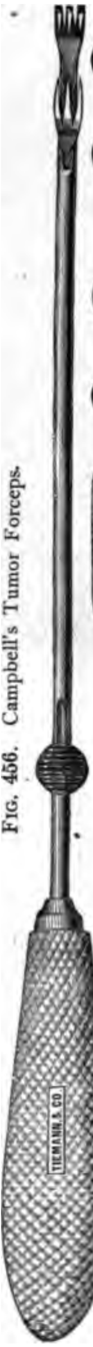
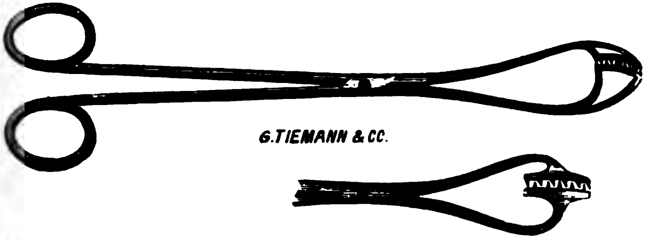


FIG. 456. Campbell's Tumor Forceps.

FIG. 457. Byrne's Vulsellum Forceps.



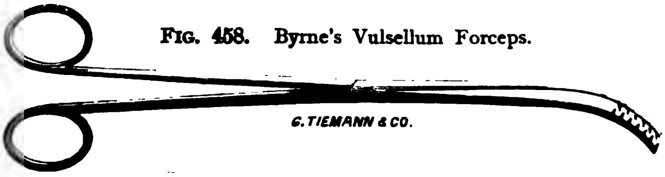


FIG. 458. Byrne's Vulsellum Forceps.

FIG. 459. Luer's Polypus Forceps.

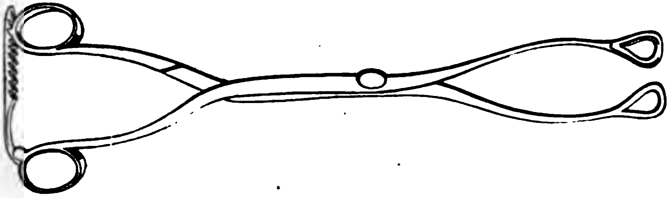


FIG. 460. Tenaculum for Nott's Speculum.

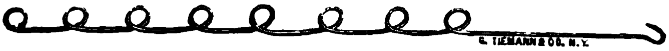


FIG. 461. Double Tenaculum.

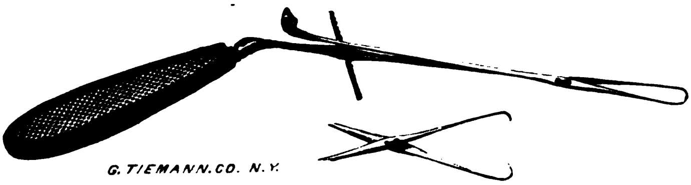


FIG. 462. Double Tenaculum Forceps.

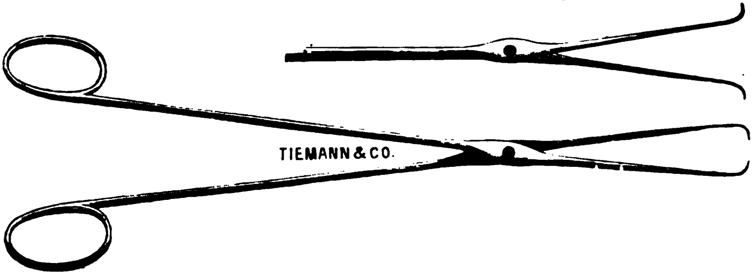
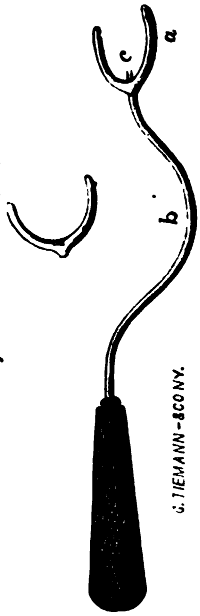


FIG. 463. Byrne's Uterine Fixator.



GYNÆCOLOGICAL INSTRUMENTS.

For Uterine and Ovarian Tumors.

FIG. 464 Sims' Vulsellum Hook.

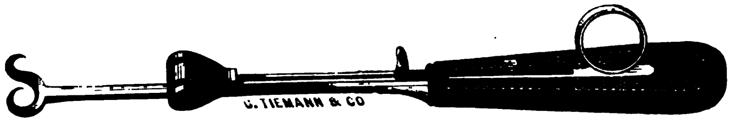


FIG. 465. McClintock's Polypus Forceps.

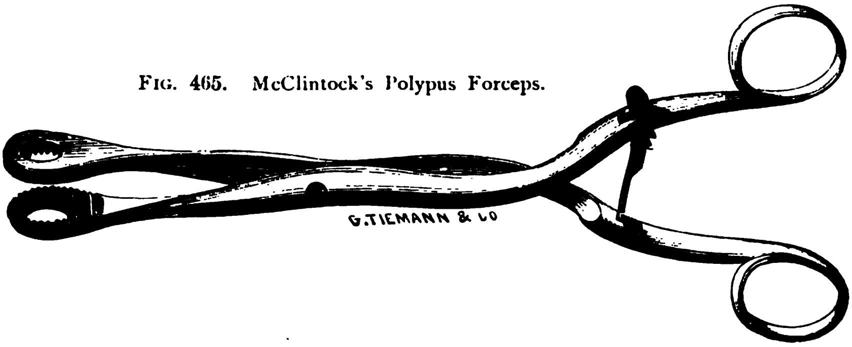


FIG. 466. Sims' Enucleator Blunt Hook.

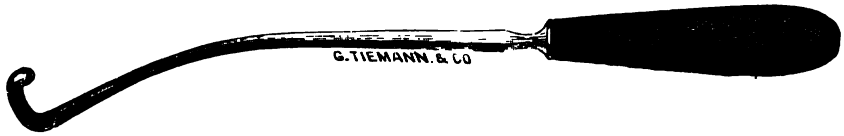


FIG. 467. Sims' Enucleator.

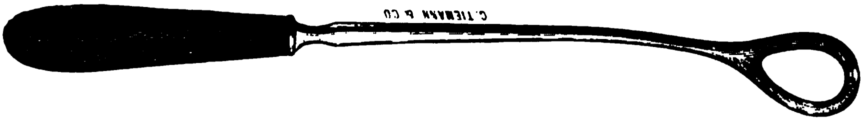


FIG. 468. Sims' Tampon Screw.

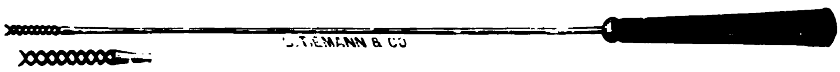


FIG. 469. Aveling's Polyptome.

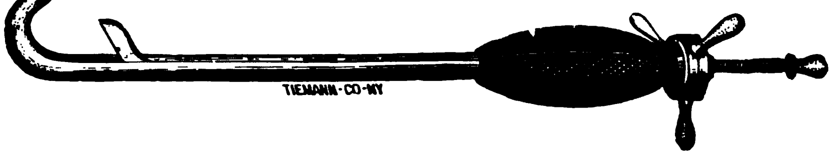
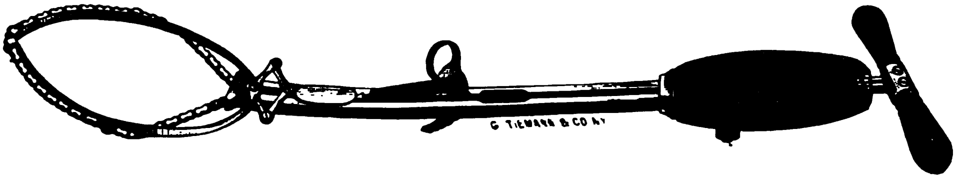


FIG. 470. Sims' Port Chain Ecraseur.



GYNÆCOLOGICAL INSTRUMENTS.

FOR ACTUAL CAUTERY.

FIG. 471. Cautery Irons.

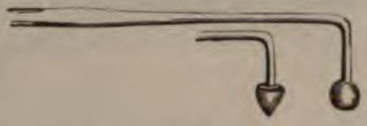


FIG. 472. Blowpipe for Heating Irons.

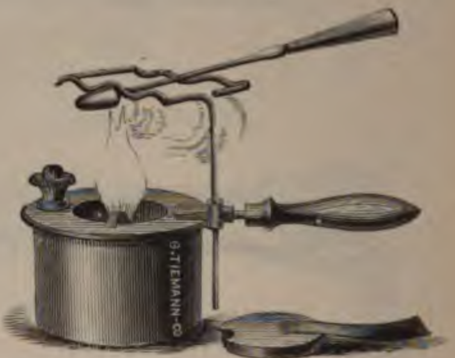


FIG. 473. Byrne's Galvano-Cautery Battery.

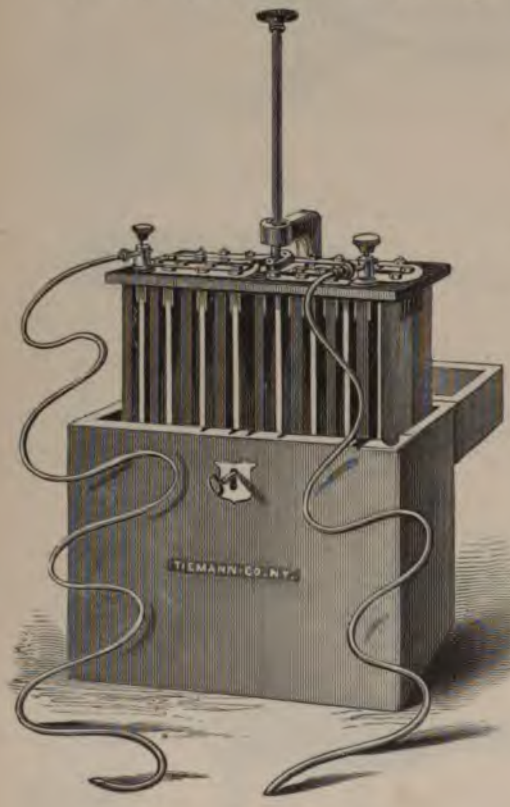


FIG. 474.
Galvano-Cautery
Sling or Ecraseur.

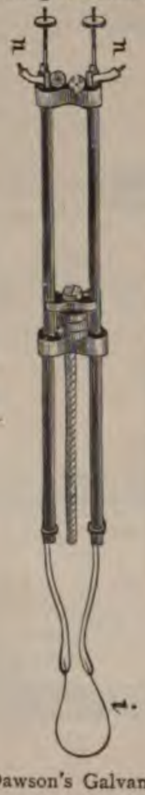


FIG. 475.
Cautery Irons

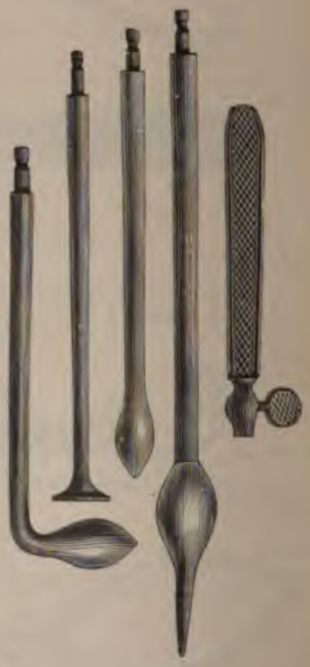
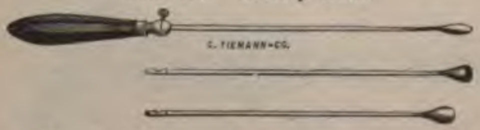


FIG. 476. Cautery Irons.



Paquelin's Thermo-Cautery, page 134, Part I.

Dawson's Galvano-Cautery, page 112, Part I.

GYNÆCOLOGICAL INSTRUMENTS.

PARACENTESIS AND DRAINAGE.

FIG. 477. Chassaignac's Drainage Trocar.

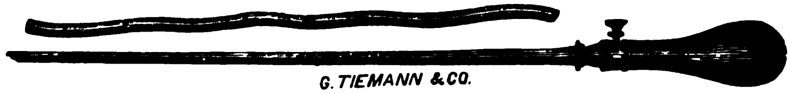


FIG. 477b. Black Rubber Drainage Tubing (any size of guage).

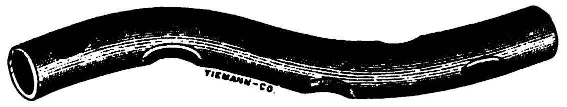


FIG. 477c. Ellis' Drainage Spiral.

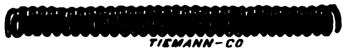
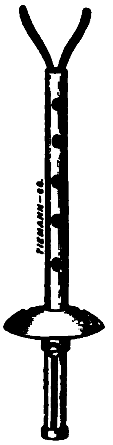


FIG. 477d. Callender's Drainage Canula.



TROCARS.

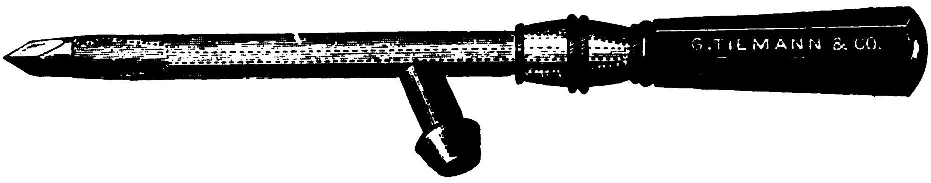
Rectum	fig. 105.	Part III.
Buck's Rectum	fig. 106.	Part III.
Van Buren's Tube	fig. 107.	Part III.
Duchenne's Exploring	fig. 288.	Part I.
" "	fig. 288b.	Part I.
Exploring	fig. 289.	Part I.
Tiemann & Co.'s Exploring	fig. 290.	Part I.
Nœggerath's Exploring	fig. 292.	Part I.
Hydrocele, set of four	fig. 177.	Part III.
Wood's and Harris'	fig. 179b.	Part III.
Abdominal and Hydrocele	fig. 179c.	Part III.
Little's	fig. 181b.	Part III.
Exploring, and cover	fig. 181c.	Part III.

ASPIRATORS.

Dieulafoy's	fig. 424.	Part I.	Tiemann & Co.'s	fig. 428.	Part I.
Hospital	fig. 425.	Part I.	Higgins'	fig. 429.	Part I.
Steurer's	fig. 426.	Part I.	Codman's	fig. 430.	Part I.
Emmett's	fig. 427.	Part I.	Fitch's	fig. 431.	Part I.

PARACENTESIS ABDOMINIS.

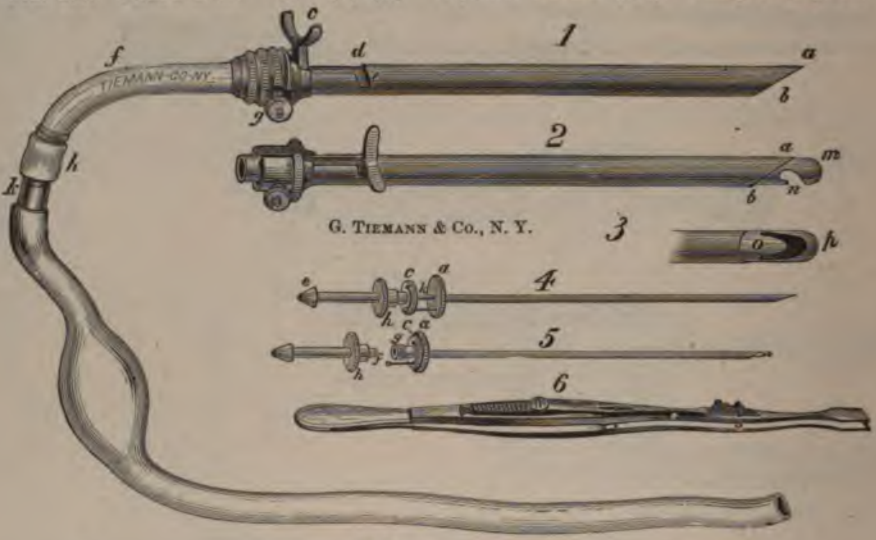
FIG. 478. Emmett's Trocar.



GYNÆCOLOGICAL INSTRUMENTS.

For Paracentesis Abdominis.

FIG. 479. Fitch's Dome Trocar (1, 2, 3). Aspirator Needles (4, 5). Clamp Forceps (6).



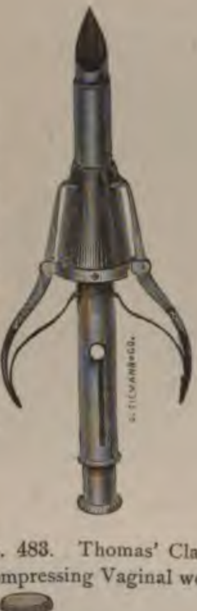


FIG. 480. Spencer Welles' Trocar.

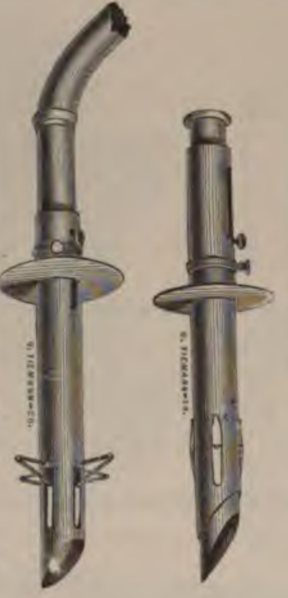


FIG. 481. Thomas' Trocar.

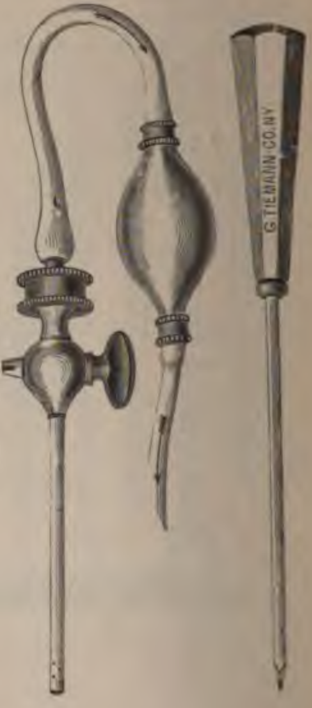
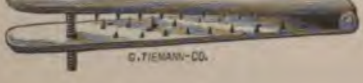


FIG 482. Flint's Trocar.

FIG. 483. Thomas' Clamps for compressing Vaginal wounds.



GYNÆCOLOGICAL INSTRUMENTS.

OBSTETRICAL FORCEPS.

FIG. 484. Hodge's.

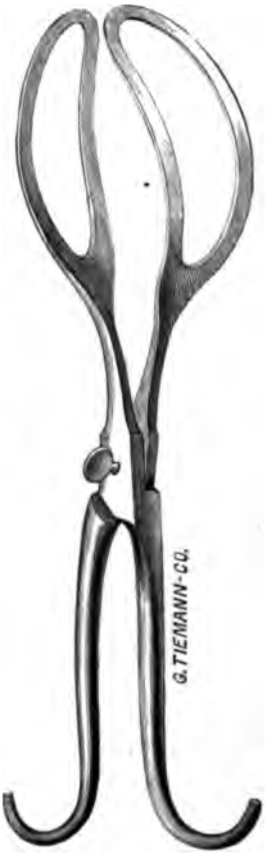


FIG. 485. White's.

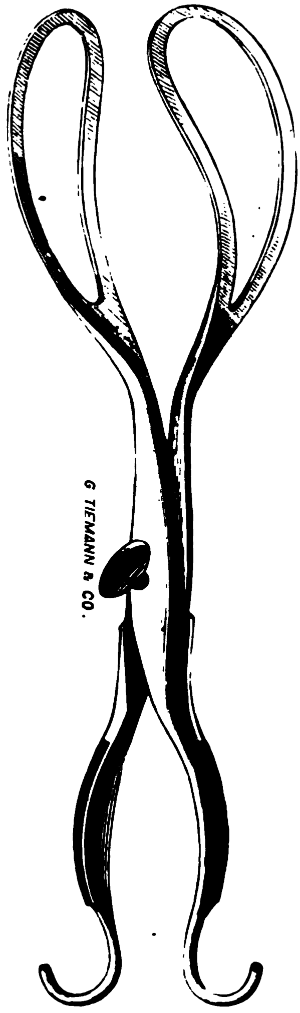


FIG. 486. Miller's (jointed).

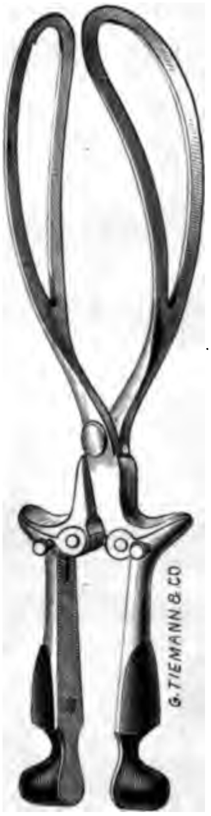


FIG. 487. Buzzle's.

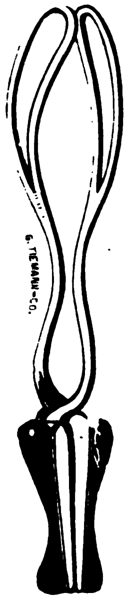
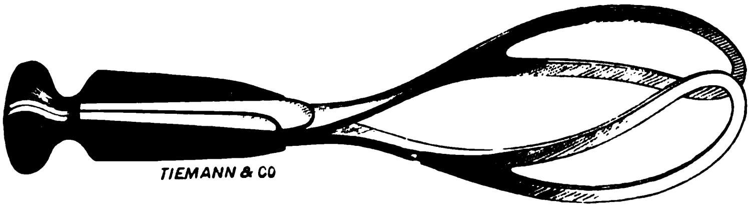


FIG. 488. Denman's.



GYNÆCOLOGICAL INSTRUMENTS.

OBSTETRICAL FORCEPS.

FIG. 489. Lœwenthal's (1, 2).

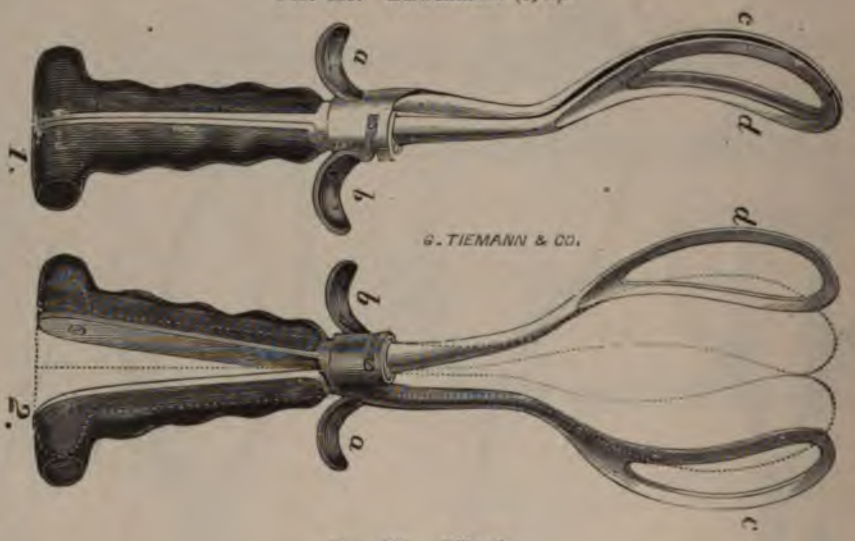


FIG. 490. Elliott's.

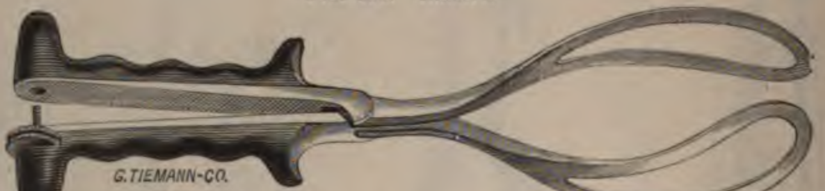


FIG. 491. Simpson's.

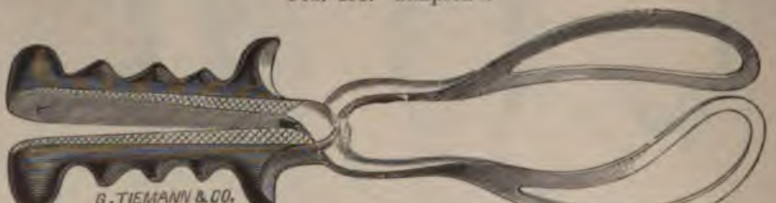
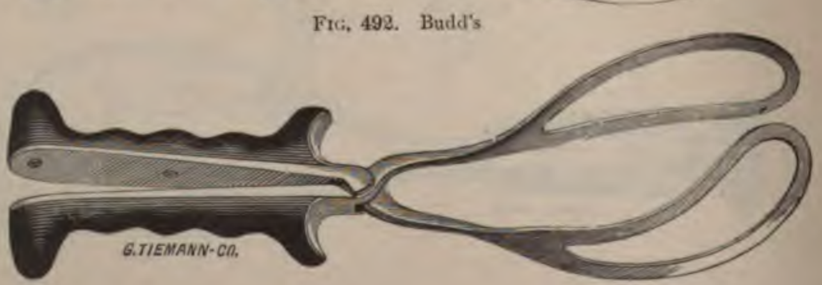


FIG. 492. Budd's



GYNÆCOLOGICAL INSTRUMENTS.

OBSTETRICAL FORCEPS.

FIG. 493. Robertson's.

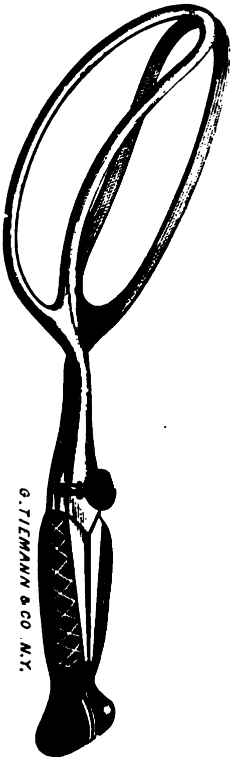


FIG. 494. Vectis.

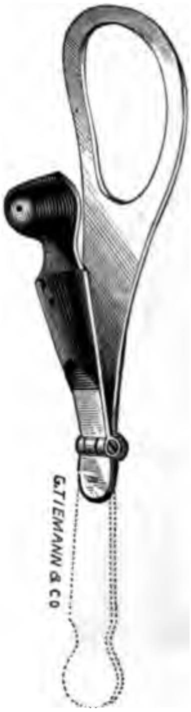


FIG. 495. Davis'.

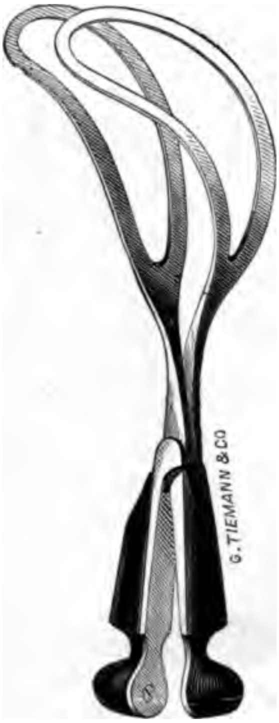


FIG. 496. Bedford's.

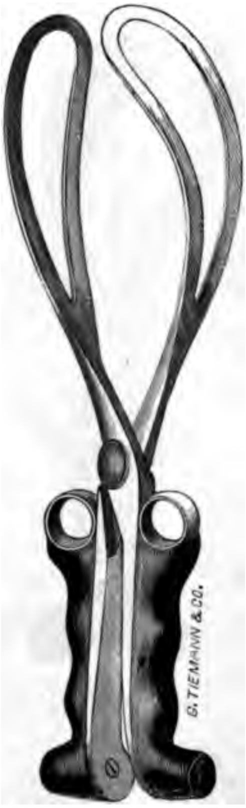


FIG. 496b. Scholler's Cord Carrier.

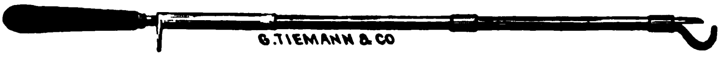
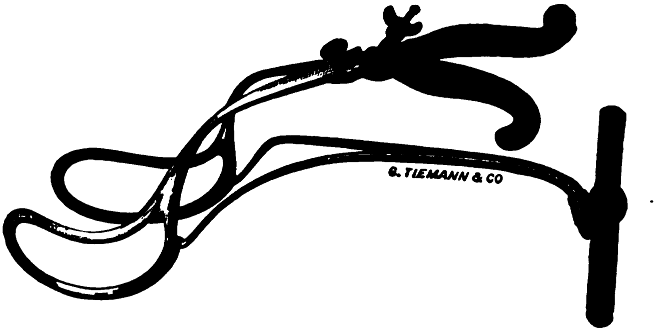


FIG. 497 Tarnier's New Obstetric Forceps.



GYNÆCOLOGICAL INSTRUMENTS.

OBSTETRICAL FORCEPS.

FIG. 498. McLean's.

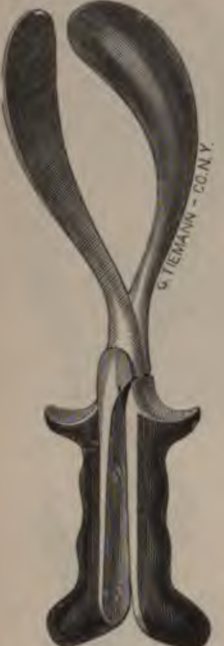


FIG. 499. Nægeli's.

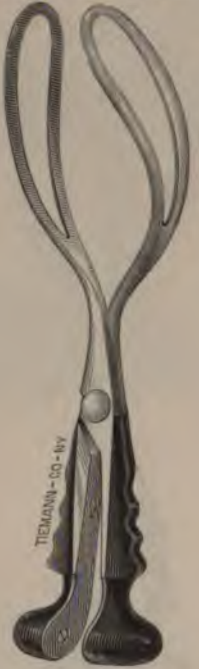


FIG. 500. Roller's.

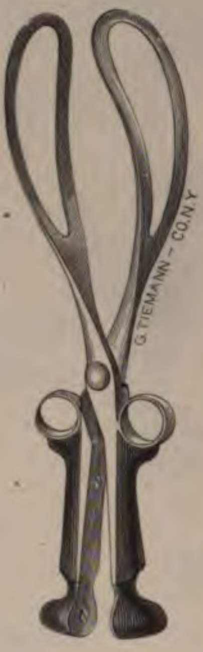


FIG. 501. Blake's.

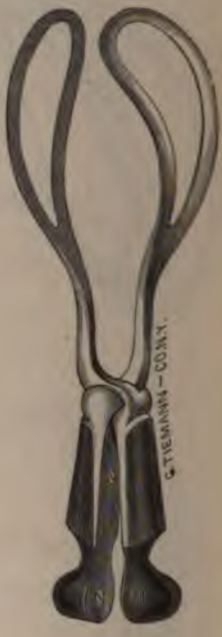


FIG. 502. Ives'.

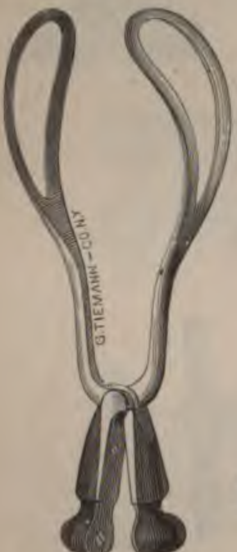


FIG. 502*b*. Draper's.

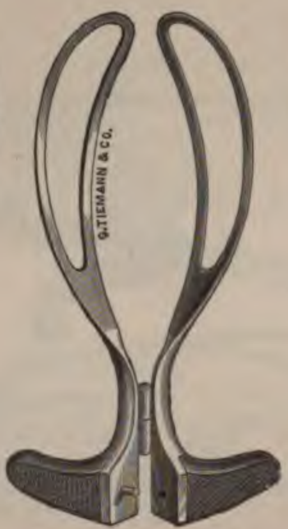


FIG. 503. Hunter's.

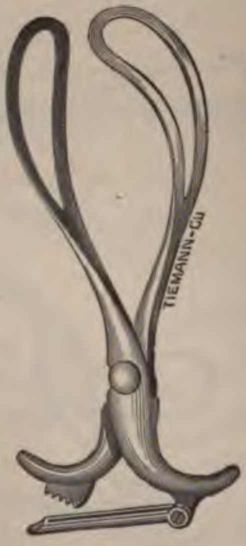
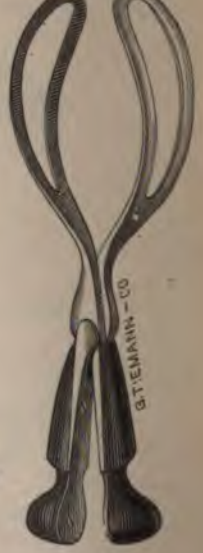


FIG. 504. Thomas'.



GYNÆCOLOGICAL INSTRUMENTS.

OBSTETRICAL FORCEPS.

FIG. 505. Tarsitani's.

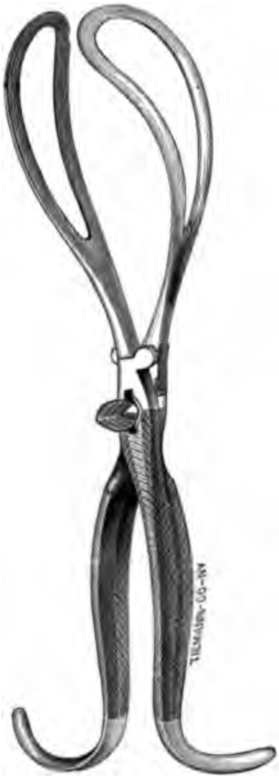


FIG. 506. (1, 2.) Brickel's.

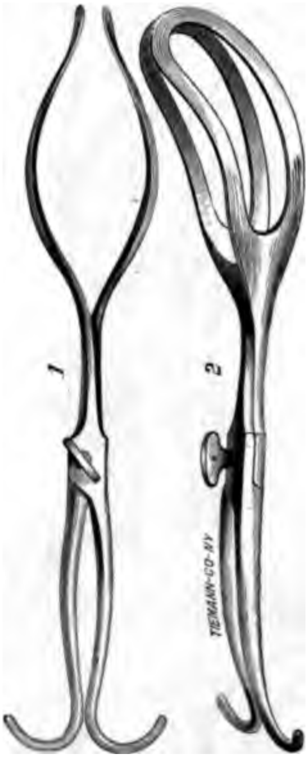


FIG. 507. Comstock's

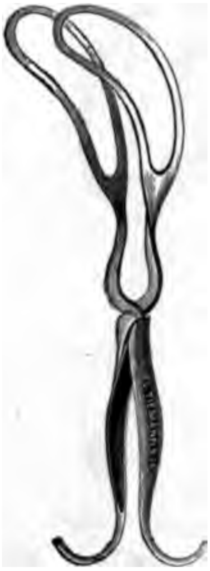


FIG. 508. Osborn's.

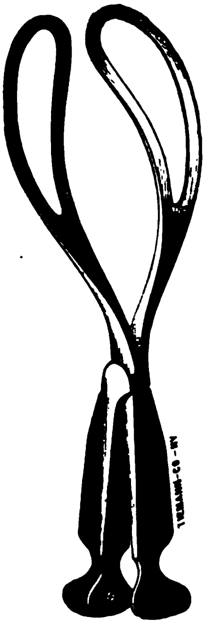


FIG. 509. Taylor's.

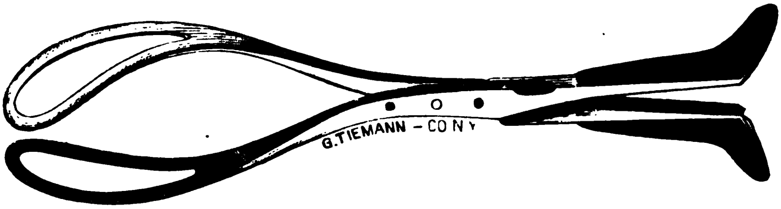
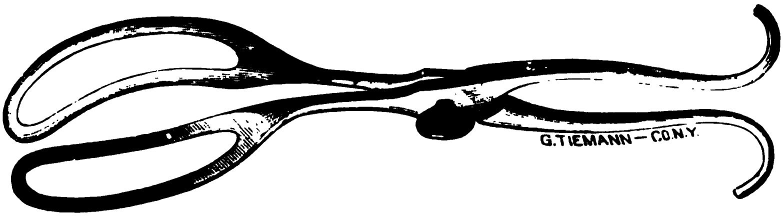


FIG. 510. Robinson's.



GYNÆCOLOGICAL INSTRUMENTS.

OBSTETRICAL FORCEPS.

FIG. 510*b*. Hale's.

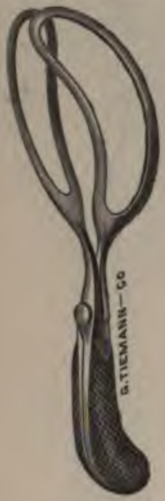


FIG. 510*c*. Jenk's.

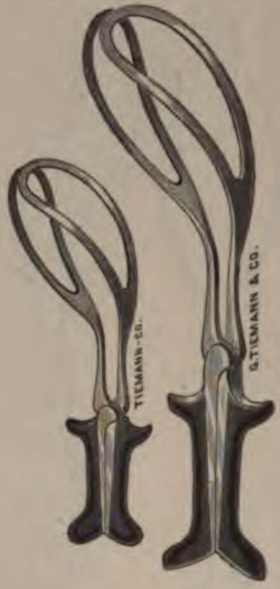

TIEMANN—CO.
G. TIEMANN & CO.

FIG. 510*d*. Trueheart's.

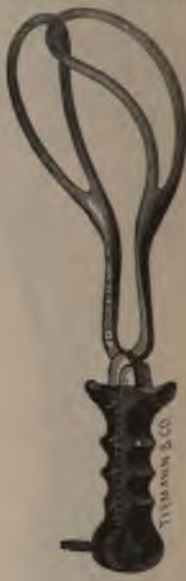


FIG. 510*e*. Vedder's.

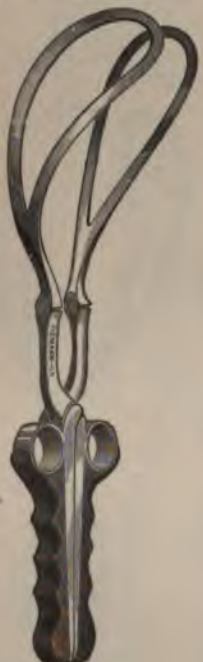


FIG. 510*f*. Bethel.

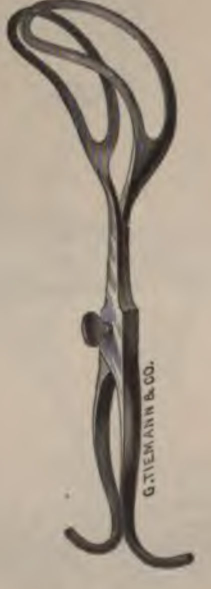

G.TIEMANN & CO.

FIG. 510*g*. Rockwell's.

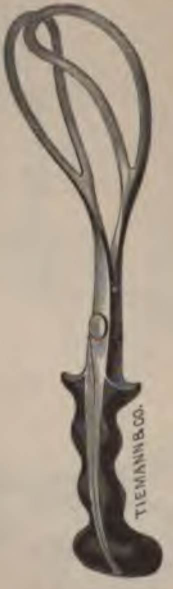
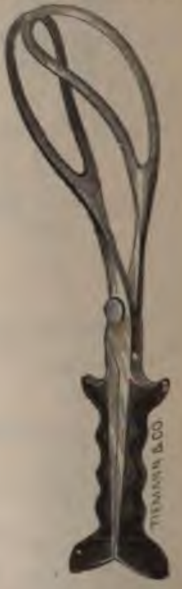


FIG. 510*h*. Mathew's.



GYNÆCOLOGICAL INSTRUMENTS.

OBSTETRICAL FORCEPS.

Fig. 510*i*. Newman's.

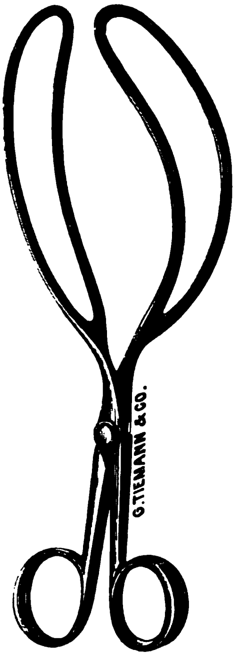


Fig. 510*k*. Sawyer's.

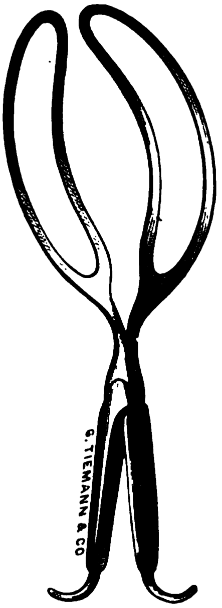


Fig. 510*l*. Gillette's.

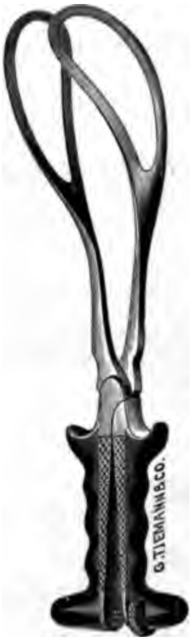


Fig. 510*m*. McFerran's.

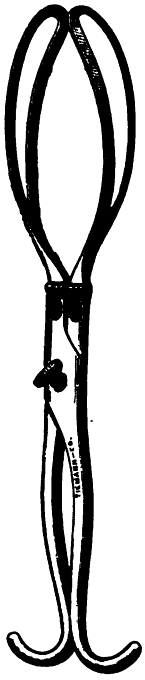


Fig. 510*n*. Ryerson's Vectis.

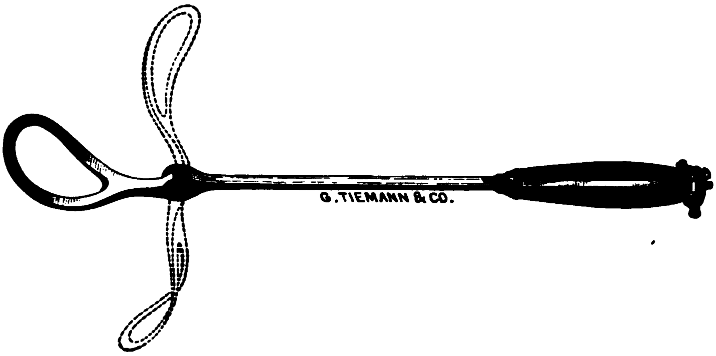
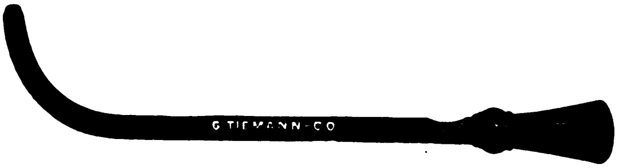


Fig. 510*o*. Robinson's Insufflator.

For the lungs of infants who are born in a state of semi-asphyxia, after prolonged or difficult labor.



GYNÆCOLOGICAL INSTRUMENTS.

Placenta and Embryotomy Instruments.

FIG. 511. Dewee's Hook and Carey's Lever.

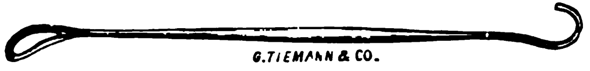


FIG. 512. Tiemann & Co.'s Embryotomy Forceps.

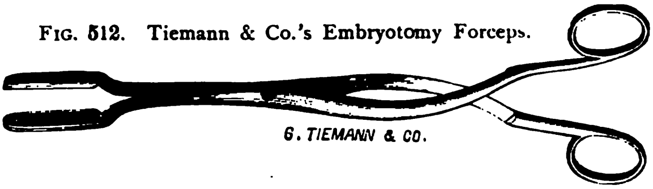


FIG. 513. Placenta Forceps.

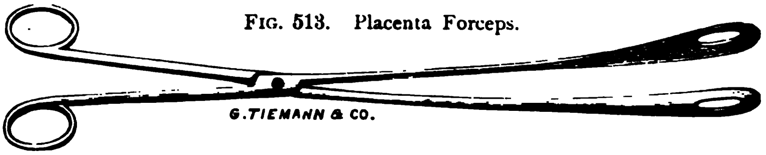
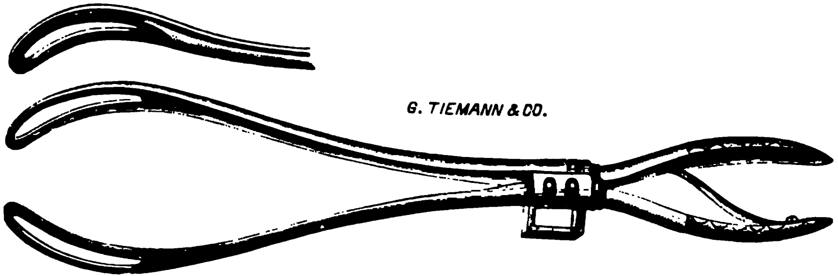
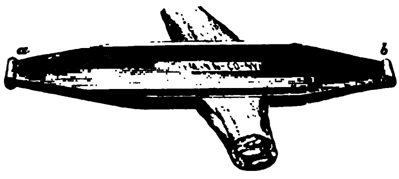


FIG. 514. Bachelder's Embryotomy Forceps.



See also Figs. 318, 319, 426, Sponge Tents, Barne's Dilators, Trocars, etc.

FIG. 515. Pulling's Funis Clamp.



(*Extract from the Medical Record.*)

The possible occurrence of hemorrhage from the umbilical cord, through loosening of the ligatures, is frequently a source of anxiety to the accoucheur, when he leaves his patient after delivery. Accidents from this cause, if not very frequent, are yet sufficiently formidable to give importance to effective means by which pressure on the cord may be rendered constant under all circumstances. Having this end in view, I have devised an elastic funis clamp, made of a single strip of thin steel doubled on itself, and shaped as shown in the cut, which represents it enclosing a section of the funis. Through the skill of Messrs. TIEMANN & Co., it has been rendered safe, effective, simple and cheap. The opposed surfaces being convex, the pressure is nearly as great when they are approximated as when the separation is considerable. It is clasped and unclasped by sliding the extremities of the arms at *b* past each other. I have used one of these little instruments in about twenty cases, and it is still in good order. I generally remove it on my second visit, when I find the cord beneath it compressed to the thinness of paper, and the vessels perfectly obliterated. It is very convenient, besides giving such a sense of security that I should be very unwilling to do without it now. Two or more clamps should be carried, one being used to apply temporarily to the placental end of the funis.—*Ezra R. Pulling, M. D., New York. April 22, 1875.*

GYNÆCOLOGICAL INSTRUMENTS.

FOR OBSTRUCTED LABOR.

FIG. 516. Holme's Perforator.

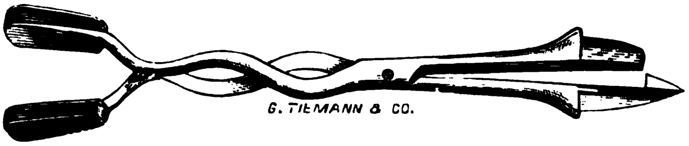

G. TIEMANN & CO.

FIG. 517. Bedford's Perforator.

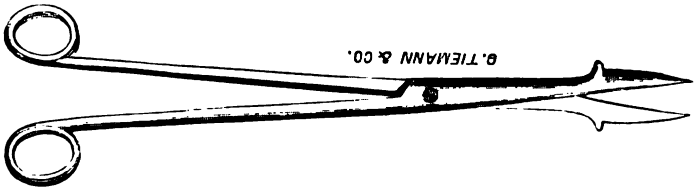

G. TIEMANN & CO.

FIG. 518. Simpson's Perforator.

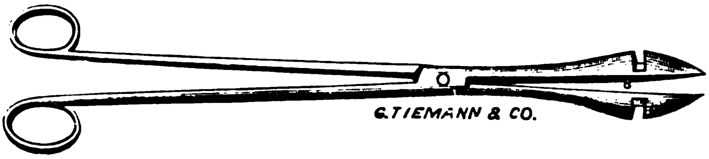

G. TIEMANN & CO.

FIG. 519. Smellie's Perforator.

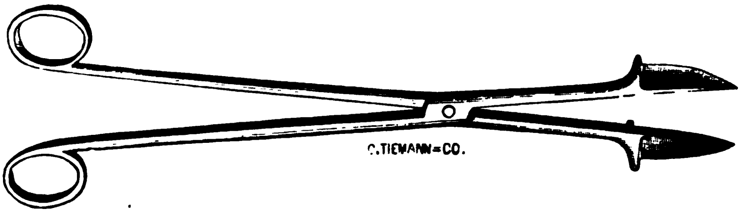

G. TIEMANN & CO.

FIG. 520. Nægelie's Perforator.

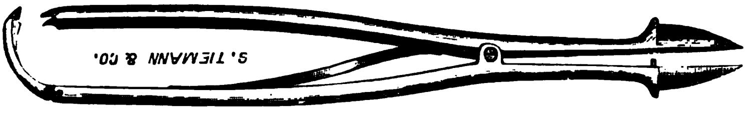

G. TIEMANN & CO.

FIG. 521. Bachelder's Perforator.

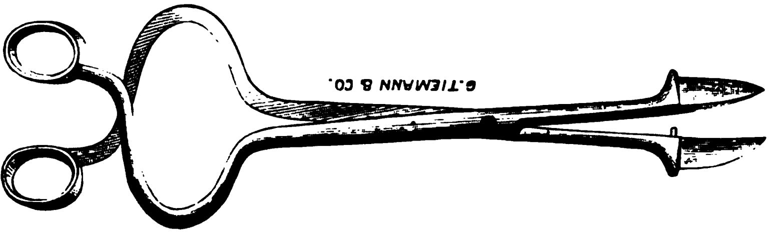
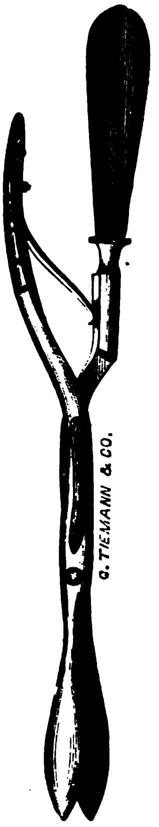

G. TIEMANN & CO.

FIG. 522. Blot's Perforator.


G. TIEMANN & CO.

GYNÆCOLOGICAL INSTRUMENTS.

FOR OBSTRUCTED LABOR.

Fig. 523. Thomas' Perforator.

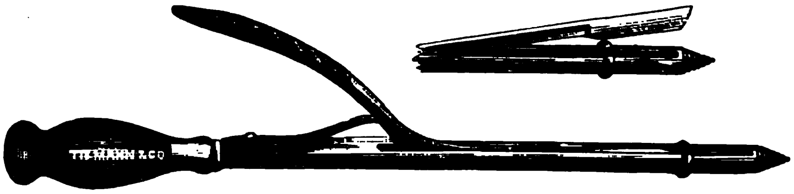


Fig. 524. Taylor's Blunt Hook.

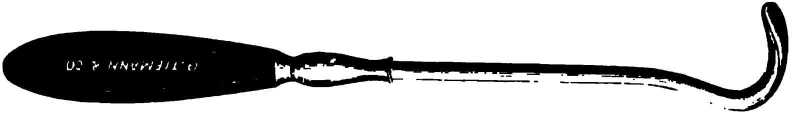


Fig. 525. Bedford's Guarded Blunt Hook and Crotchet.

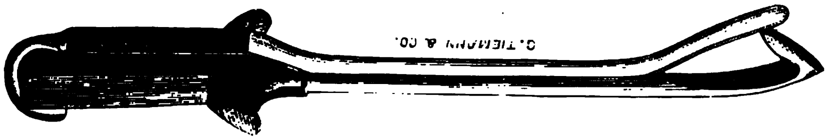


Fig. 526. Blunt Hook and Crotchet.

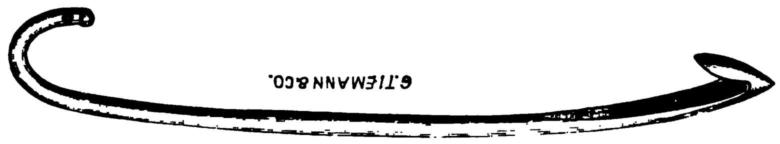


Fig. 527. Decapitating Hook.

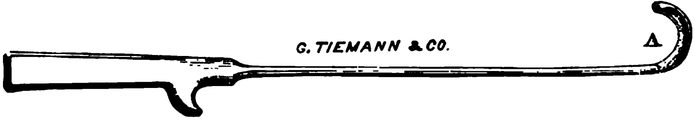
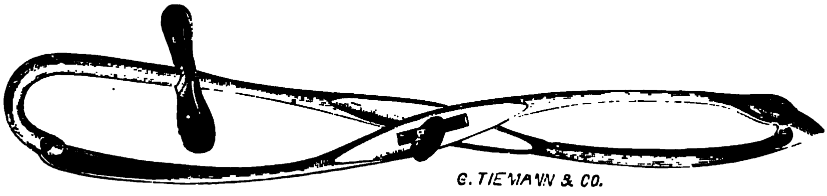


Fig. 528. Guarded Blunt Hook and Crotchet



GYNÆCOLOGICAL INSTRUMENTS.

FOR OBSTRUCTED LABOR.

Fig. 529. Meig's Craniotomy Forceps.

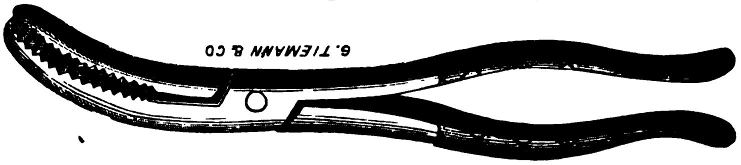


Fig. 530. Thomas' Craniotomy Forceps.

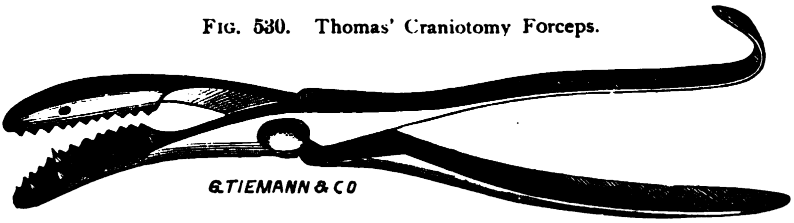


Fig. 531. Lusk's Cephalotrite.

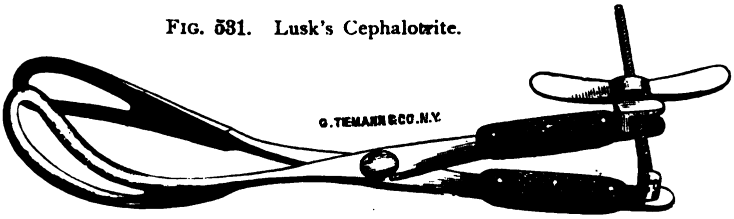


Fig. 532. Simpson's Cranioclast.

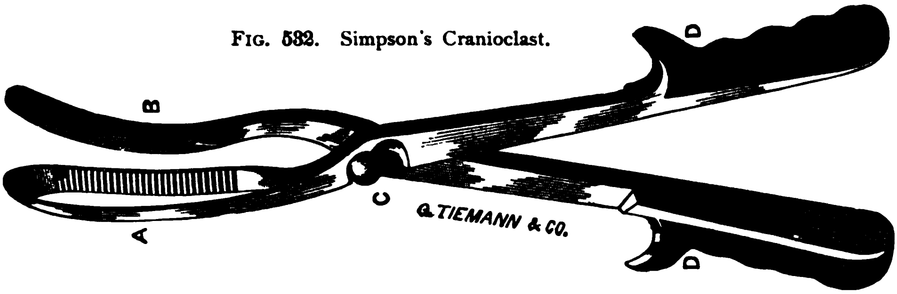
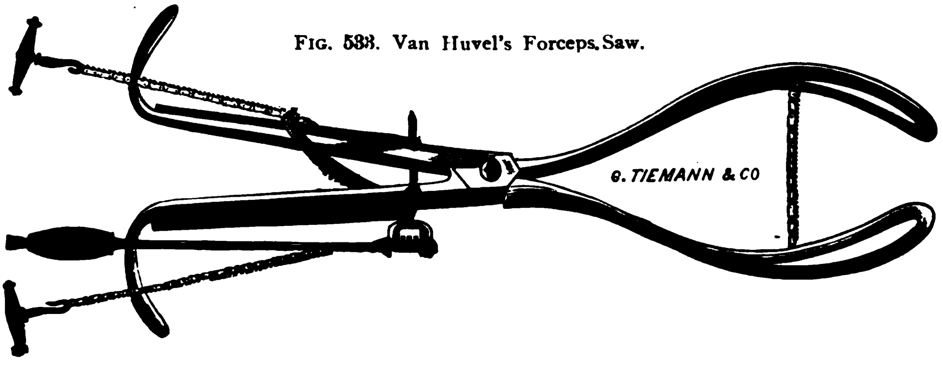


Fig. 533. Van Huvel's Forceps Saw.



GYNÆCOLOGICAL INSTRUMENTS.

FOR OBSTRUCTED LABOR.

FIG. 533*b*. White's Perforator.

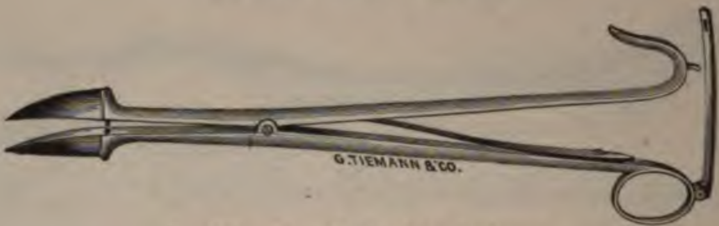


FIG. 533*c*. Braun's Trephine Perforator.

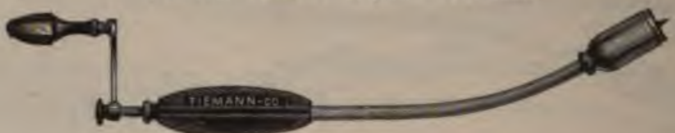


FIG. 533*d*. Trueheart's Trephine Perforator.

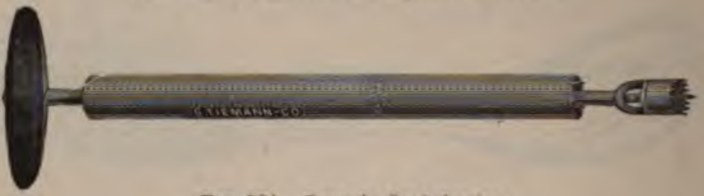


FIG. 534. Braun's Cephalotrite.

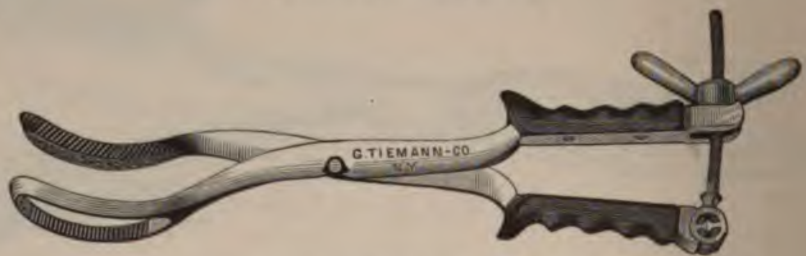
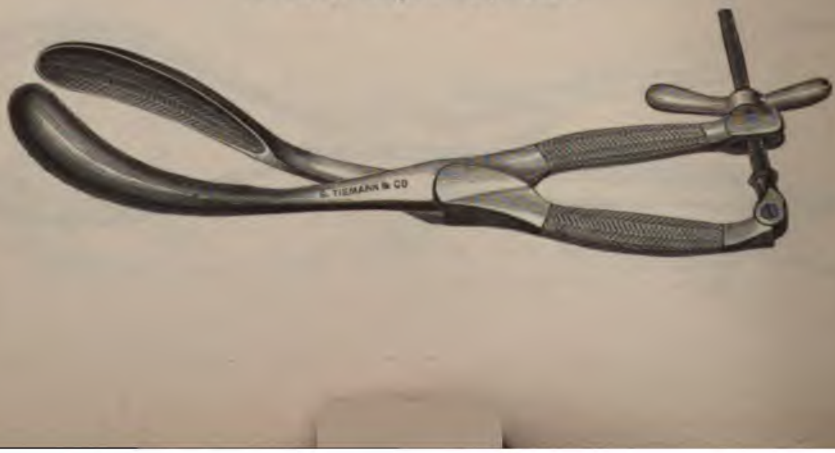


FIG. 534*b*. Simpson's Cephalotrite.



GYNÆCOLOGICAL INSTRUMENTS.

For Lacerations of the Female Perineum.

FIG. 535. Ashton's Ruptured Perineum Needle.

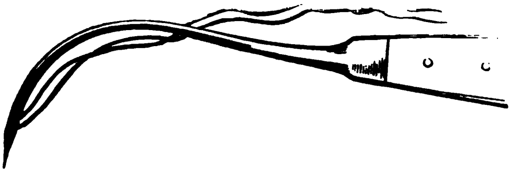


FIG. 536. Helical Needle for Ruptured Perineum.

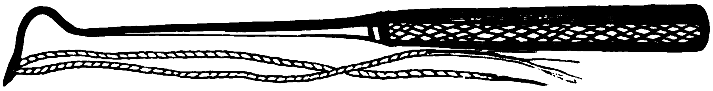


FIG. 537. Agnew's Forceps, with Adjuster.

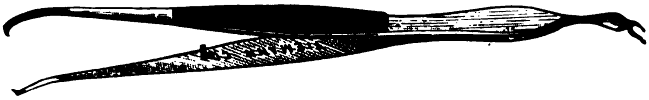


FIG. 538. Agnew's Needle-Holder and Needles.

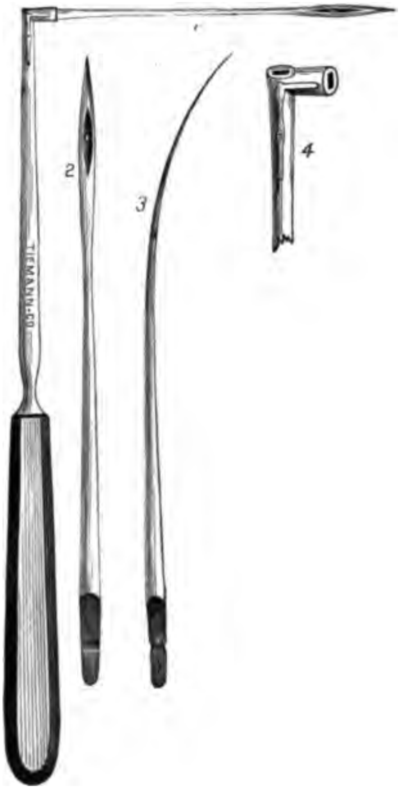


FIG. 539. Shot Compressor.

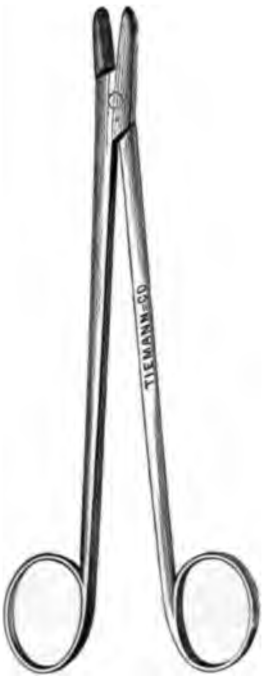
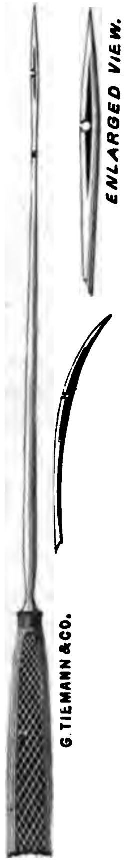


FIG. 540. Skeene's Needle for Ruptured Perineum.



Peaslee's Needles for Ruptured Perineum. Suture Needles, full curve, half curve, or straight. See page 68, Part I., of this Catalogue.

GYNÆCOLOGICAL INSTRUMENTS.

For Lacerations of the Female Perineum.

FIG. 541. Brickell's Perineal Stay.

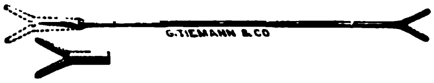


FIG. 541*b* Munson's Quill Suture Stay.

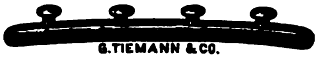


FIG. 542. Peaslee's Perineum Needles (detachable handle).

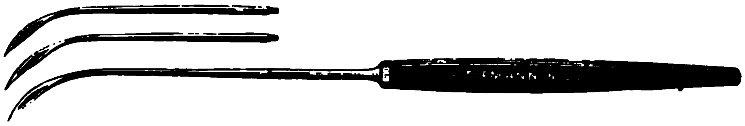


FIG. 542*b*. Peaslee's Perineum Needle (right and left).

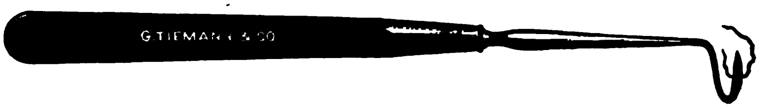


FIG. 543. Parker's Perineum Needles (encased in handle).

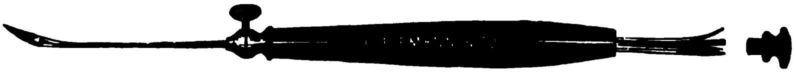
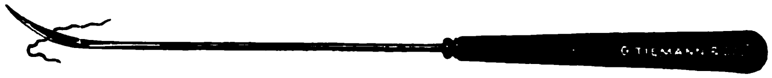


FIG. 544. Usual Perineum Needle.



Agnew's Set of Instruments for Ruptured Perineum.

1	Scalpel	$1 00
1	Pair of Agnew's Forceps, with Adjuster	2 75
1	Ashton's Needle	75
4	Curved Suture Needles	50
1	Agnew's Needle-holder and 3 Needles	4 50
2	Coils of Silver Wire	1 00
1	Shot Compressor	2 50
1	Pair Curved Scissors	3 50
1	Tenaculum	80
2	Skeins Silk Ligature	20
1	Probe-pointed Bistoury	1 00
6	Pieces of Cane or Bougie for Quill-Sutures	25
1	Skein of Twine	10
1	Piece of Wax	—
1	Mahogany or Rosewood Case, lined with oil-dyed velvet	5 50
	Amount	$24 35

ANAL & RECTAL INSTRUMENTS.

FIG. 545. Bodenhamer's Reflector and Lens.
(It can be used for gas, oil or any other illuminating material.)

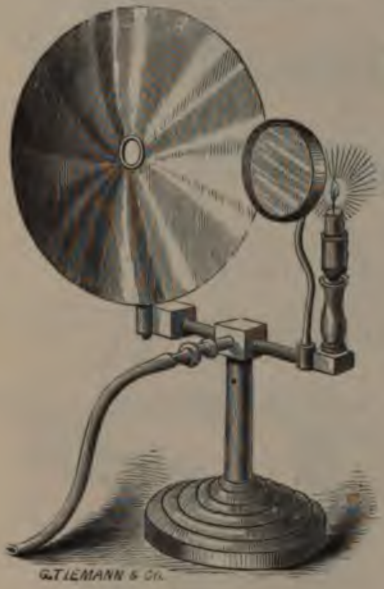

G.TIEMANN & Co.

FIG. 546. Ashton's Fenestrated Speculum Ani.

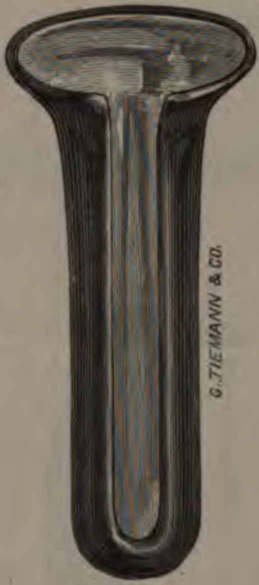

G.TIEMANN & CO.

FIG. 547. Trivalve Trellis Speculum Ani.

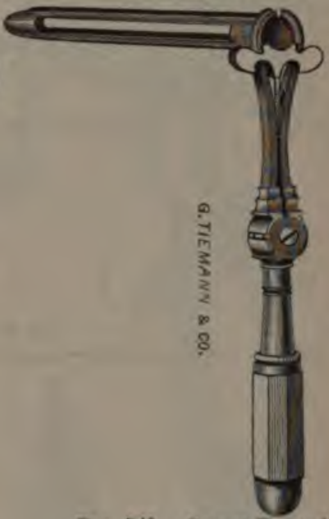

G.TIEMANN & CO.

FIG. 549. Gorget Formed Anal Speculum.

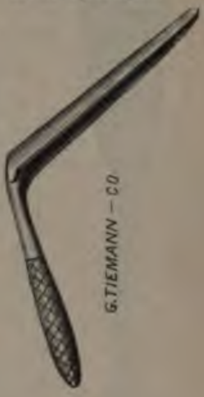


FIG. 548. Bodenhamer's Recto-Calonic Endoscope.

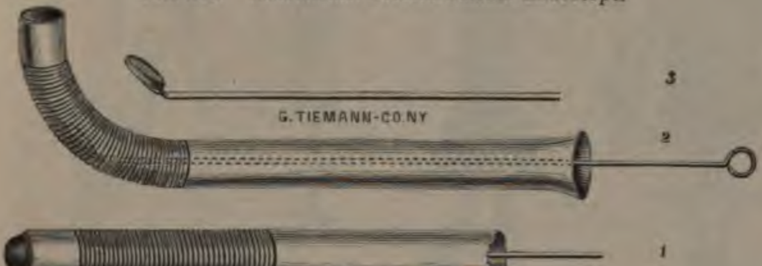


FIG. 550. English Rectal Bougie (Cylindrical), 12 sizes.

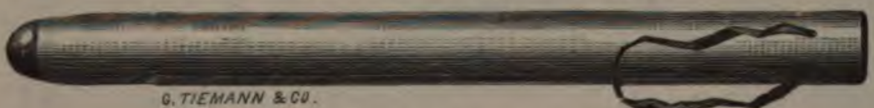
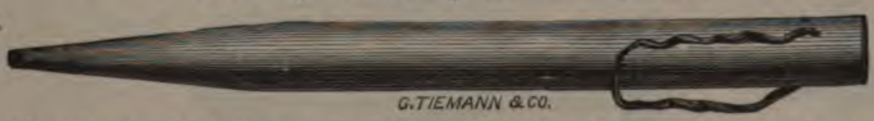

G.TIEMANN & CO.

FIG. 551. English Rectal Bougie (Conica. Point), 12 sizes.


G.TIEMANN & CO.

See Baxter's Speculum, fig. 229; Bivalve Speculum Ani, fig. 237, etc.; Dome Top Speculum, fig. 223; Ferguson's Speculum, fig. 218; Sims' Speculum, fig. 242; Tiemann & Co.'s Speculum, fig. 225.

ANAL & RECTAL INSTRUMENTS.

FIG. 552. Bodenhamers' Rectal Exploring Sounds or Bougies (10 sizes).

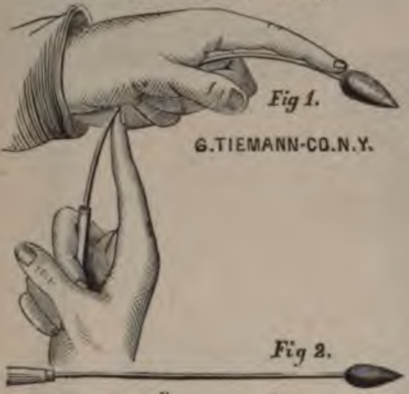


Fig 1.
G.TIEMANN-CO.N.Y.
Fig 2.

FIG. 553. Syphon Syringe.

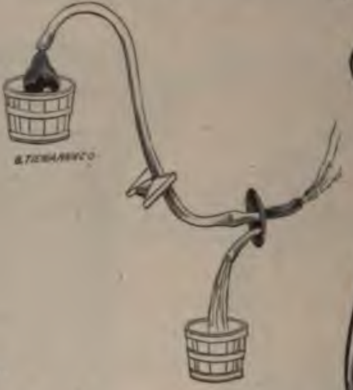


FIG. 554 Small Bivalve Anal Speculum, for Children.

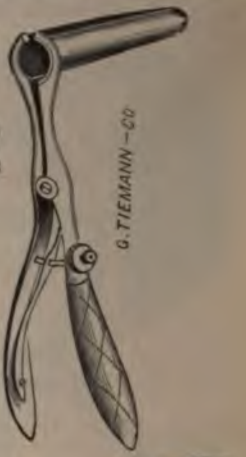


FIG. 555. Rectal Dilator.

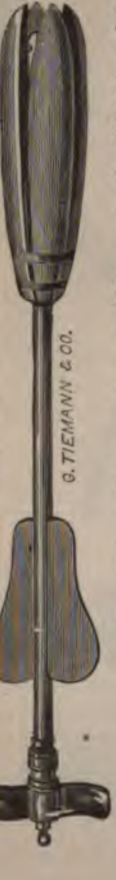

G.TIEMANN & CO.

FIG. 556. Whitehead's Improved Instrument for Dilatation of Stricture of the Rectum by Elastic Pressure.

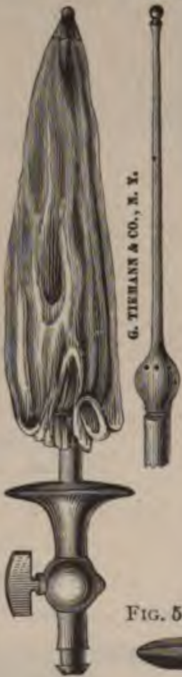

G. TIEMANN & CO., N. Y.

FIG. 557. Bodenhamer's Rectal Irrigator.

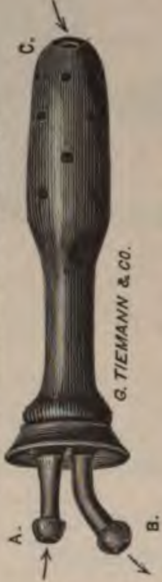


FIG. 558. Suppository (Hard Rubber).

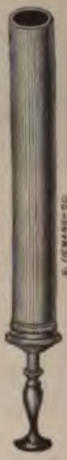


FIG. 559. Bivalve Speculum Ani.

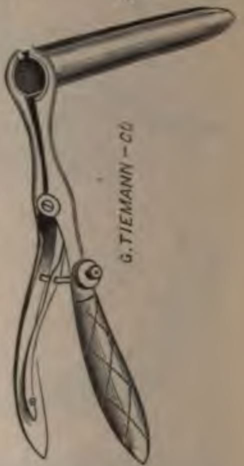


FIG. 560. Set of three Cautery Irons to fit 1 handle.

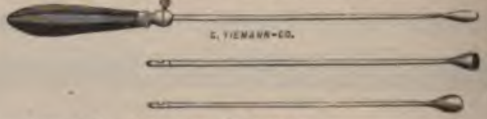

G. TIEMANN-CO.

FIG. 561. Munde's Rectal Irrigator.

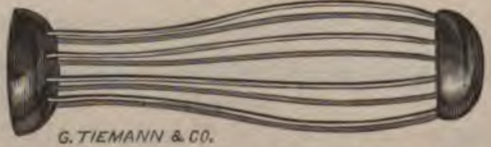
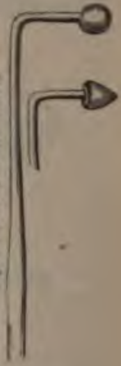

G. TIEMANN & CO.

FIG. 562. Two Rectal Cauteries, (*en roseau, en haricot.*)



Cautery Lamp and Galvano-Cautery Batteries, figs. 472 and 473.

ANAL & RECTAL INSTRUMENTS.

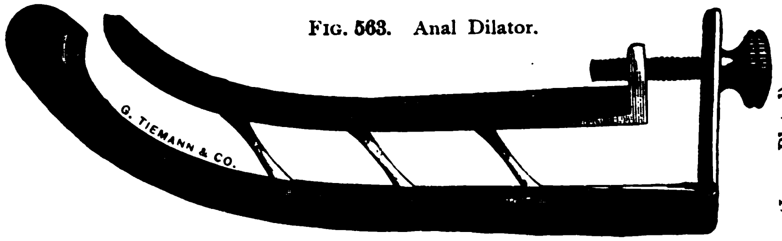
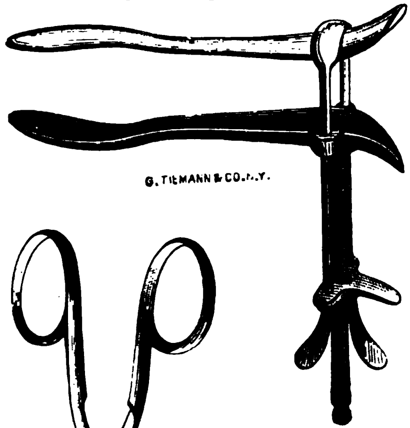


FIG. 563. Anal Dilator.

FIG. 564. Thebaud's Sphincter-Ani Dilator (for producing forcible dilatation).



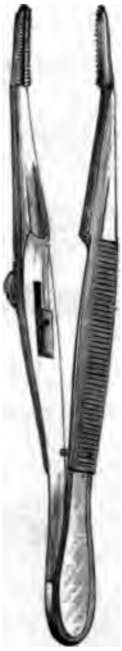


FIG. 565. Slide-Catch Artery and Needle Forceps.

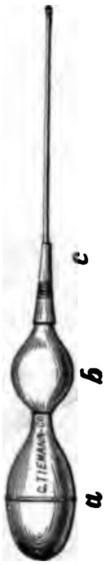


FIG. 566. Rectal Insufflator (for blowing powdered substances into the rectum, when well opened by the speculum)

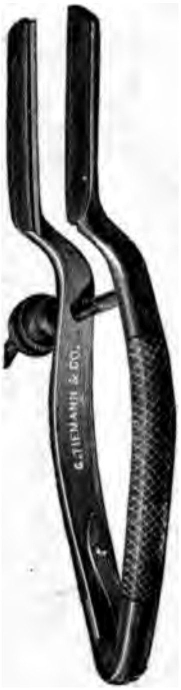


FIG. 567. Smith's Hæmorrhoidal Clamp (Ivory Plated).

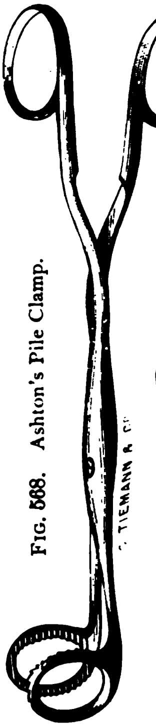


FIG. 568. Ashton's Pile Clamp.

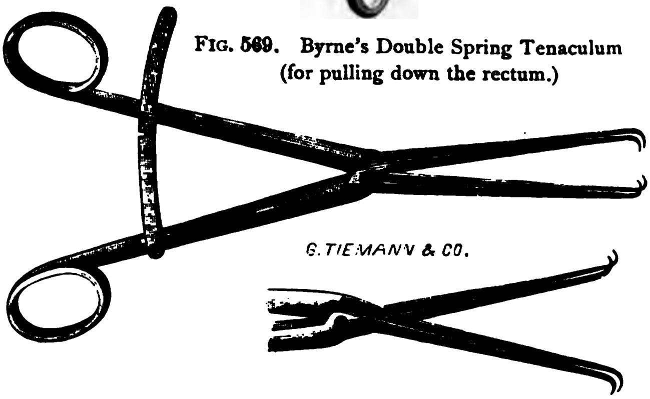


FIG. 569. Byrne's Double Spring Tenaculum (for pulling down the rectum.)

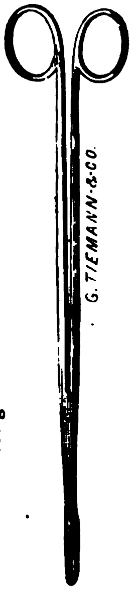
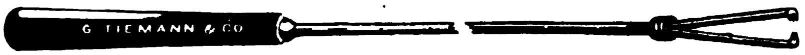


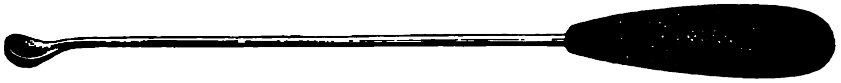
FIG. 570. Forceps for Extracting Concretions and other Foreign Substances from the Rectum.

FIG. 571. Rectal Sponge-Mop Holder.



ANAL & RECTAL INSTRUMENTS.

FIG 572. Rectal Curette (for scooping out the Rectum in Atony or Paralysis of that organ, and also for removing Ascarides of the Rectum.)



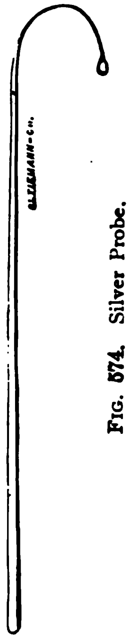


FIG. 573. Silver Probe.

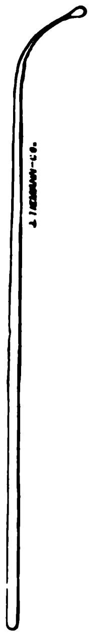


FIG. 574. Silver Probe.

FIG. 575. Recto-Cololic Enema Apparatus, consisting of a Force-Pump with a Colonic Tube attached, for injecting or forcing fluids both into the Rectum and Colon.

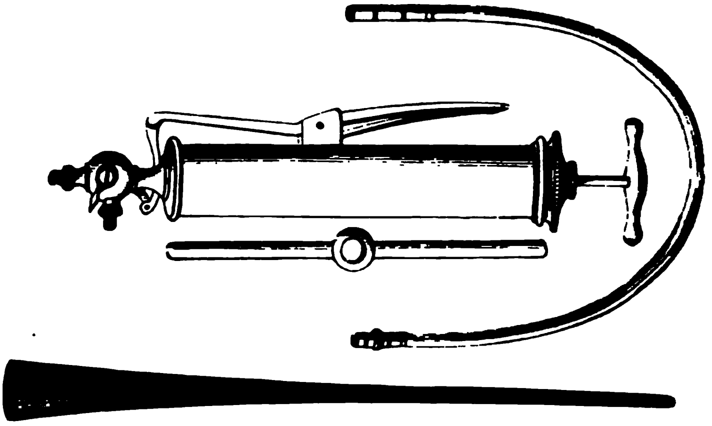
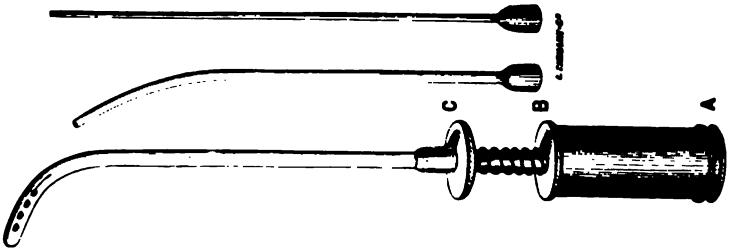


FIG. 576. Hutchinson's Improved Breech-Loading Syringe, for administering semi-solid substances into the rectum, etc.



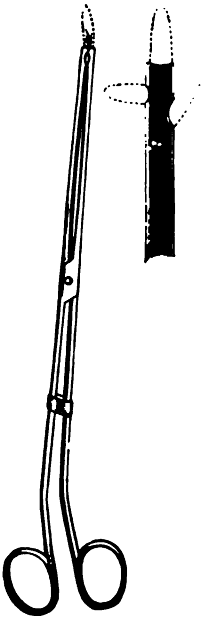
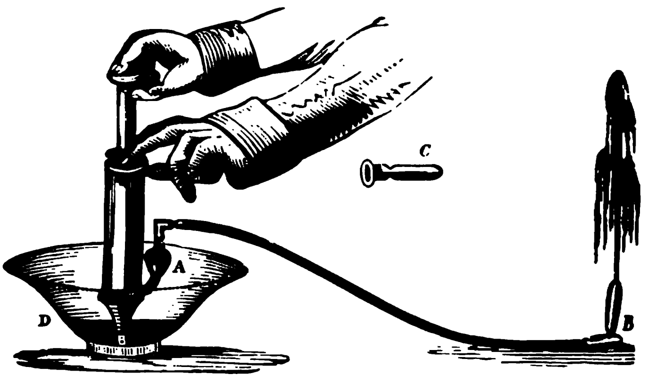


FIG. 577. Rectal Porte Caustique.

FIG. 578. Maw's Enema Pump.



See also Tiemann & Co.'s Universal Syringe, fig. 877; Davidson's Syringe, fig. 861; Syphon Syringe, fig. 862; Woodward's Syphon Douche, fig. 875.

ANAL & RECTAL INSTRUMENTS.

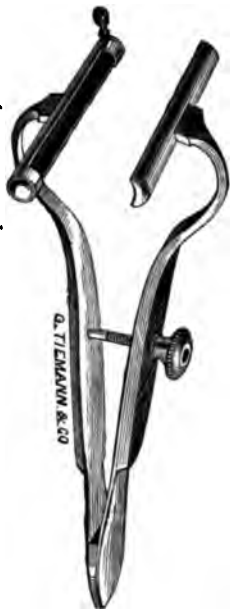


FIG. 579. Amusat's Hæmorrhoidal Clamp and Cautery combined.

FIG. 580. Rectal Brush-Holder (stem of flexible wire).

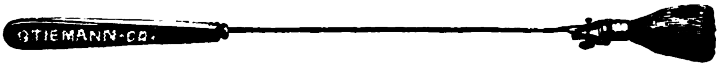


FIG. 581. Vertebrated Recto-Colonic Exploring Sound.

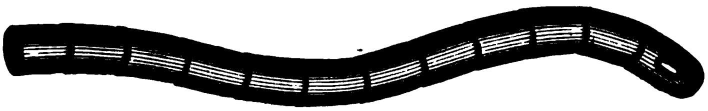


FIG. 582. Elastic Probe.

FIG. 583. Small Blunt-Pointed Curved Bistoury (for incising preternatural pouches or Sacculi of the Rectum.

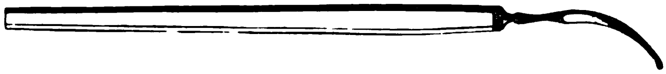


FIG. 584. Bistoury Caché, for Rectal Strictures.

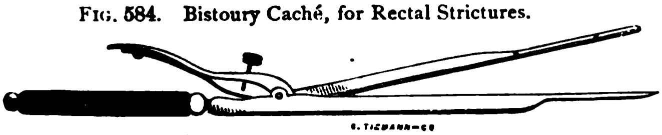


FIG. 585. Bodenhamer's Blandin's Knife.
For making the sub-mucous and sub-cutaneous section of the sphinatores ani muscles, in anal fissure.

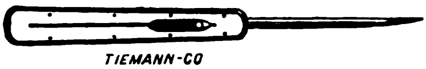
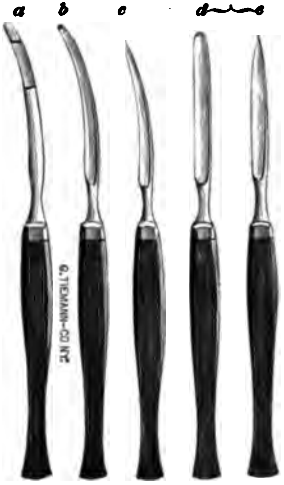


FIG. 586. Straight and Curved Sharp and Probe-Pointed Bistouries.



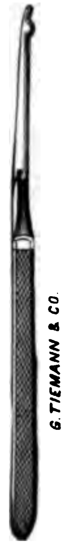


FIG. 587. Bodenhamer's Anal Fissure Knife.

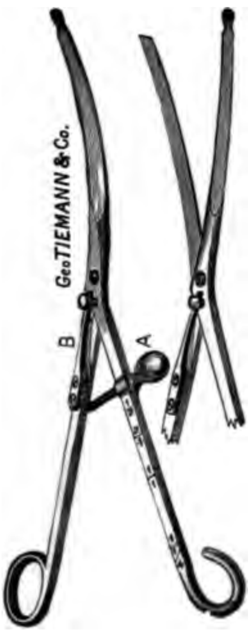


FIG. 588. Bistoury Cache for Fistula.

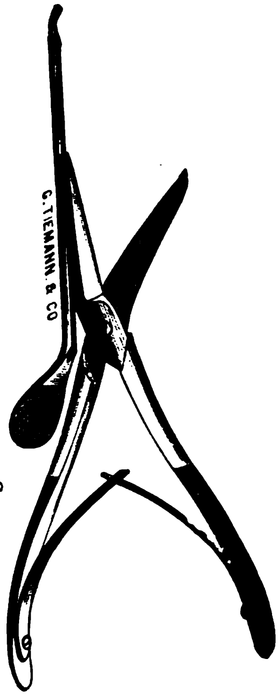


FIG. 589. Allingham's Scissors and Director, for fistula en ano.

FIG. 590. Rectal Scarificator.

ANAL & RECTAL INSTRUMENTS.

FIG. 591. Bodenhamer's Bistoury Caché, for Fistula en Ano.

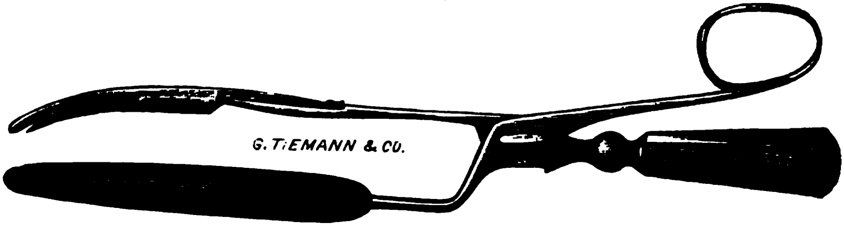


FIG. 592. Gooche's Canula for ligating Hæmorrhoidal Tumors.

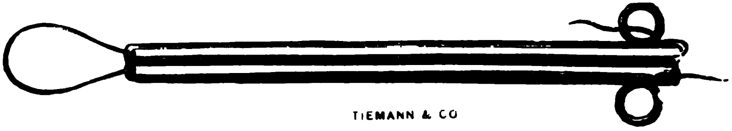


FIG. 593. Camel's Hair and Glass Brushes.

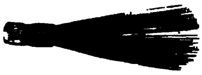


FIG. 594. Carroll's Knot Tier.

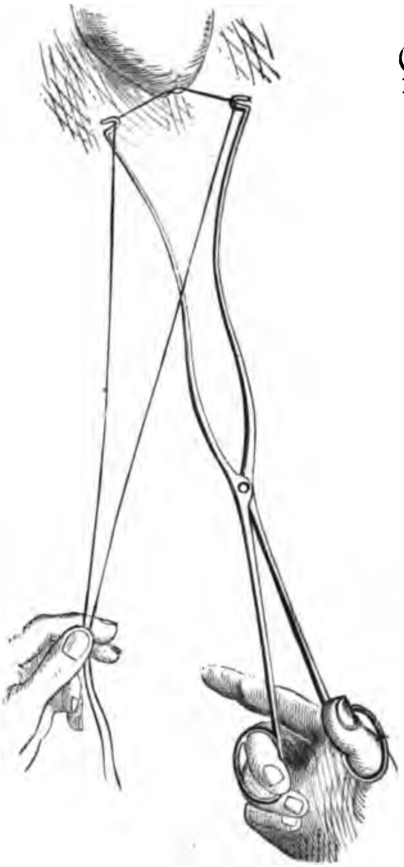


FIG. 595. Flexible Silver Director (grooved and probe-pointed.

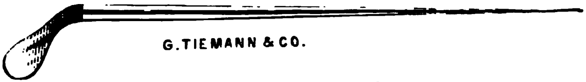


FIG. 596. Bodenhamer's Curvilinear Forceps, for facilitating the ligation of Hæmorrhoidal Tumors.

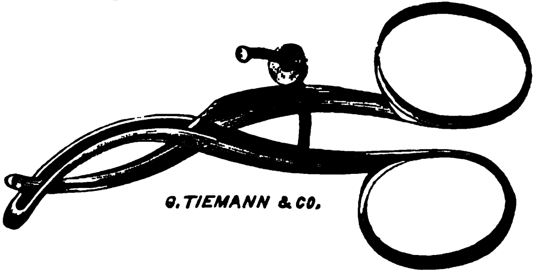


FIG. 597. Van Buren's Ligator.

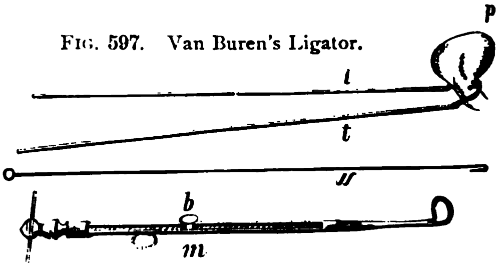


FIG. 598. Lent's Platina Cup for fusing Nitrate of Silver.

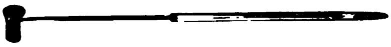
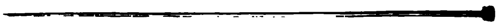


FIG. 599. Pin for transfixing Hæmorrhoidal Tumors.



See also page 92—Ecraseurs.

ANAL & RECTAL INSTRUMENTS.

FIG. 600. Lent's Ligature Carrier.

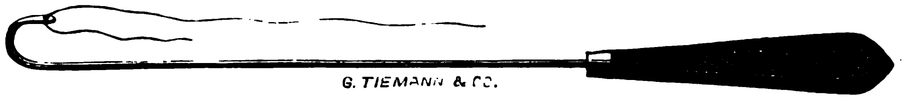

G. TIEMANN & CO.

FIG. 601. Bodenhamer's Spring Forceps, for seizing and ligating bleeding vessels, as well as Polypoid Tumors of the Rectum, when high up.

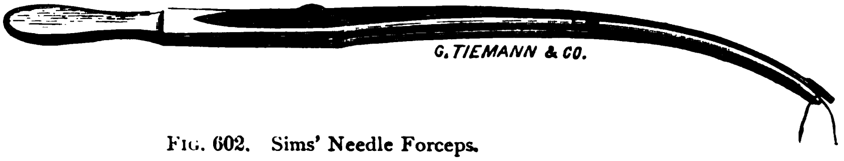

G. TIEMANN & CO.

FIG. 602. Sims' Needle Forceps.

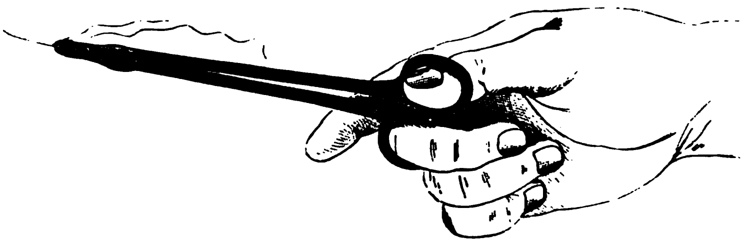


FIG. 603. Hutchinson's Needle, for the Subscutaneous Ligation of External Hæmorrhoidal Tumors.

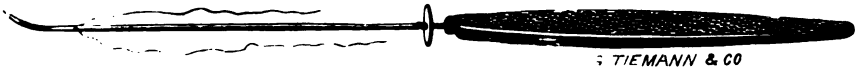


FIG. 604. Skeene's Needle for Ruptured Perineum.

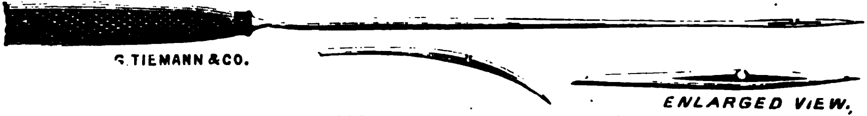

G. TIEMANN & CO.
ENLARGED VIEW.

FIG. 605. Helical Needle for Piles and Ruptured Perineum.

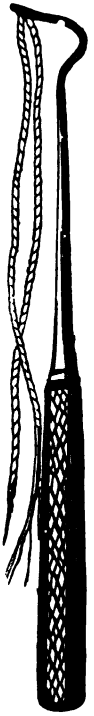


FIG. 606. Rectal Porte Mesche et Tampon.

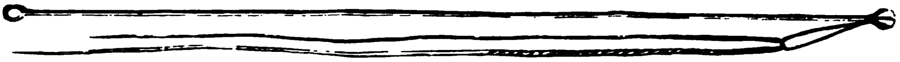


FIG. 607. Straight and Curved Suture Needles.

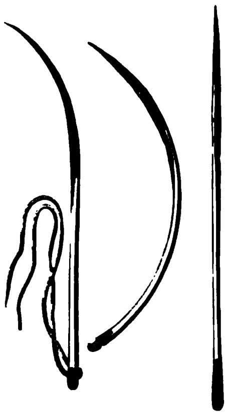


FIG. 608. Small Trocar and Acupuncture, or Exploring Needle, for testing the character of ambiguous swellings or fluid collections of the rectum.

FIG. 609. Angular Pile Needle.

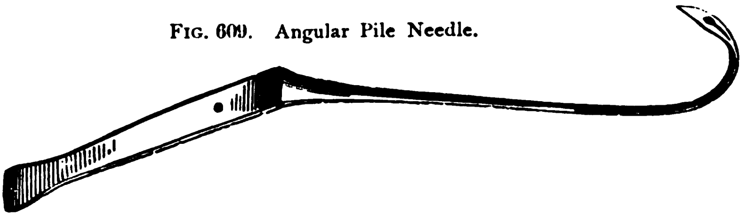
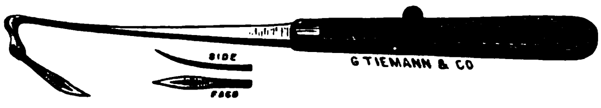


FIG. 610. Bush's Pile Needles and Holder.



ANAL & RECTAL INSTRUMENTS.

FIG. 611. Ruptured Perineum Needle.

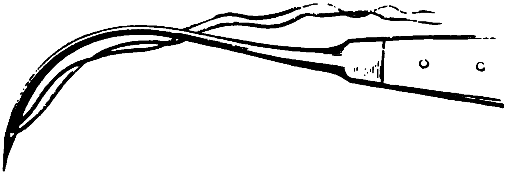


FIG. 612. Prolapsus Ani and Pile Supporter.

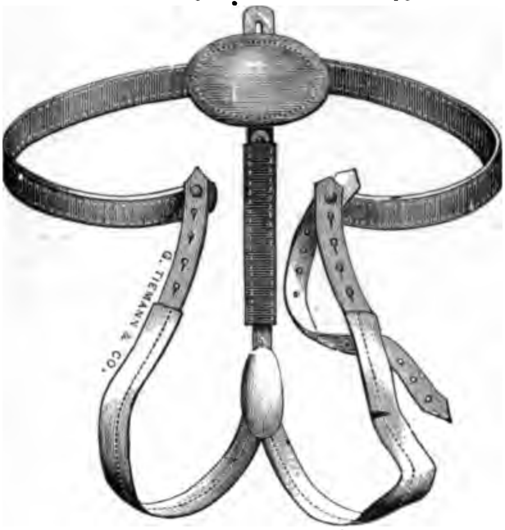

G. TIEMANN & CO.

FIG. 613. Angular Scissors, for removing external Hæmorrhoids or Ciram-Anal Growths or Excrescences.

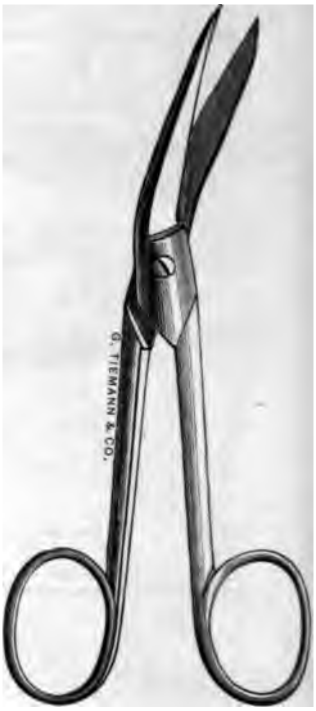

G. TIEMANN & CO.

FIG. 614. Gibson's Instrument for the Introduction of the Ligature in Anal Fistulæ.

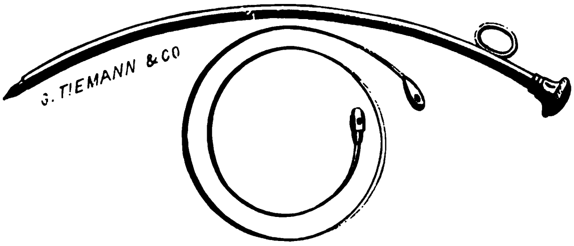
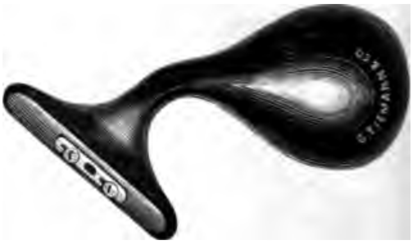


FIG. 615. Trousseau's Pile Supporter, and for treating Spermatorrhœa.


G. TIEMANN & CO.

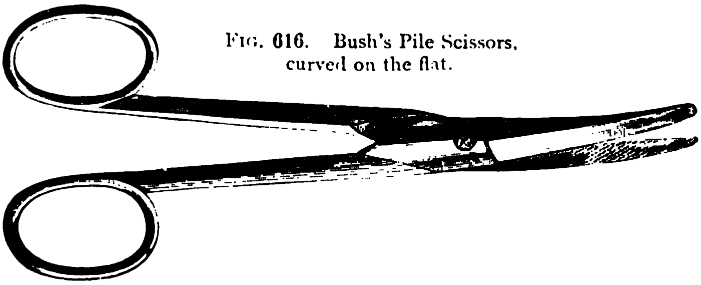
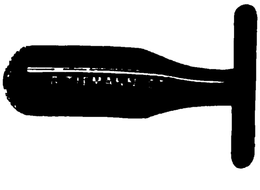


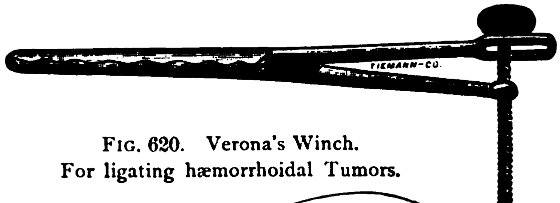
FIG. 616. Bush's Pile Scissors, curved on the flat.

FIG. 617. Pile Bougie and Prolapsus Ani Supporter.



ANAL & RECTAL INSTRUMENTS.

FIG. 619*b*. Depuytren's Enterotome.



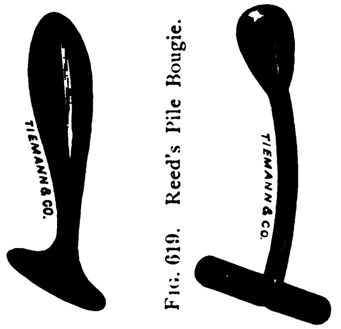
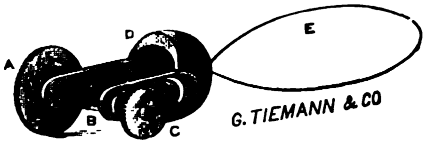


FIG. 619. Reed's Pile Bougie.

FIG. 620. Verona's Winch.
For ligating hæmorrhoidal Tumors.



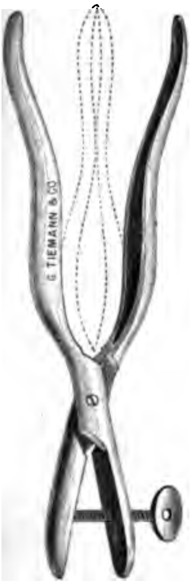


FIG. 622. Adam's Hæmorrhoidal Syringe.

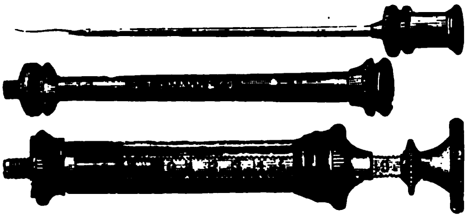


FIG. 623. Williams' Rectal Speculum.

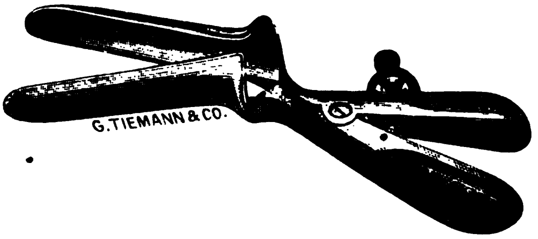


FIG. 624. Wales' Rectal Bougies.

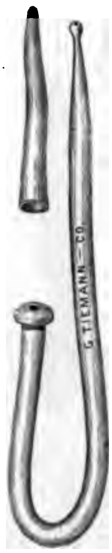
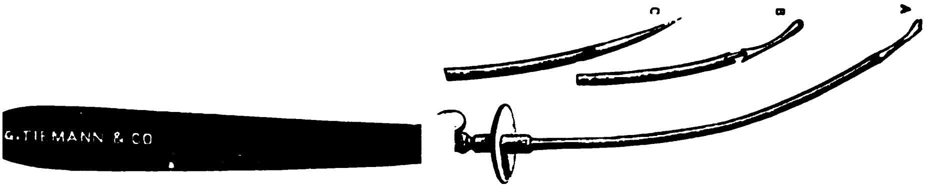


FIG. 625. Allingham's Ligature Carrier.



For facilitating the introduction of the Elastic Ligature. A double ligature can be readily drawn though a fistula o ler a tumor. It is not necessary, in fistula, to see the hook, for if the finger with a loop of india rubber around it be passed the rectum, the loop can, with great facility, be directed over the end of the probe and caught in the notch quite unassisted vision. C shows the sharp-pointed instrument adapted to the same canula, so that only one handle and one canula are uired to complete the double instrument Many other simple surgical operations may be advantageously performed by ans of the Elastic Ligature.

DITTEL'S ELASTIC LIGATURE, (1 yard long, 25 cents).

Exerts a constant and almost painless constriction upon the parts ligated with it.

HERNIA INSTRUMENTS.

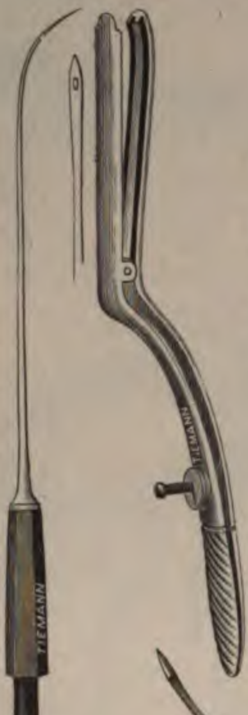


FIG. 626. Agnew's Hernia Instruments.

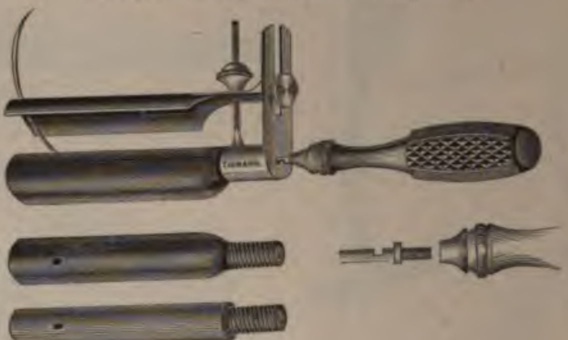


FIG. 627. Wutzer's Hernia Instruments.

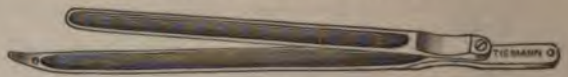


FIG. 628. Hinge Hernia Director.

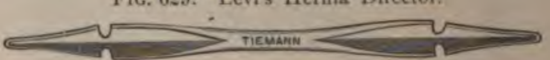


FIG. 629. Levi's Hernia Director.

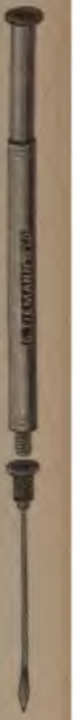


FIG. 630. Heaton's Hernia Syringe.

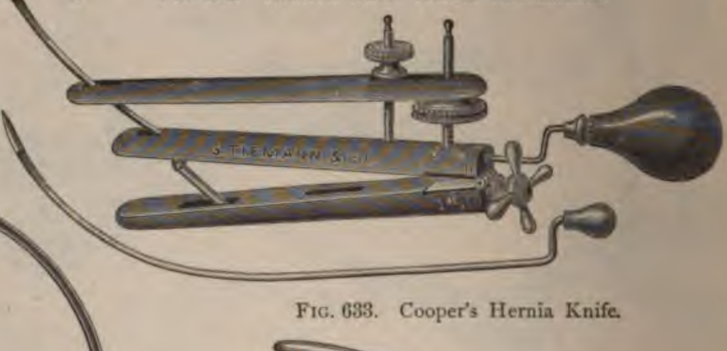


FIG. 631. Redfern Davis' Hernia Instruments.

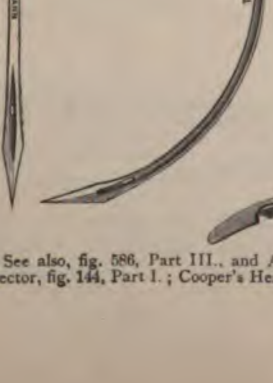


FIG. 632. Dowell's Hernia Needles.

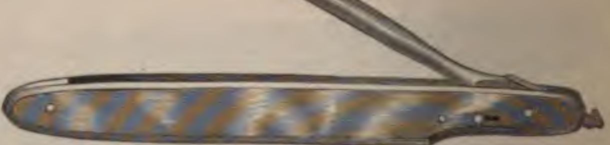


FIG. 633. Cooper's Hernia Knife.

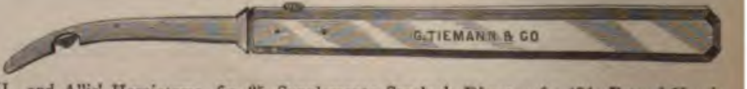
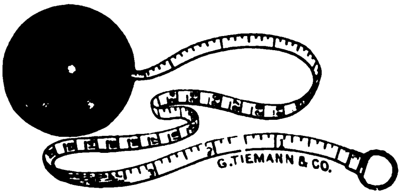


FIG. 634. Stewart's Hernia Knife.

See also, fig. 586, Part III., and Allis' Herniatome, fig. 35, Supplement; Stanley's Director, fig. 134; Peters' Hernia Director, fig. 144, Part I.; Cooper's Hernia Knife, fig. 140, Part I.

PART IV.


G. TIEMANN & CO.

TAPE MEASURE.

Please do NOT MUTILATE this Book.

In ordering, merely state the Part of the Armamentarium, the Number of the Figure, and the Name of the article desired.

Instruments not mentioned in our Price List will be furnished at the lowest market rates.

When GOODS FOR REPAIR are directed to us, the Owner's Name and Address should accompany them. This will enable us to return them to the proper place and person.

Parties finding it convenient to order through dealers are requested to insist upon receiving our manufacture, as otherwise inferior goods are frequently substituted.

All instruments of our make have our name stamped upon them.

PART IV.

GEORGE TIEMANN & CO.'S SURGICAL INSTRUMENTS,

67 Chatham Street.

Branch Store, 107 East 28th Street, New-York.

◆

ORTHOPÆDIC APPARATUS.

◆

Apparatus for the Treatment of Distortions and Debilities of the Trunk.

Shoulder Braces.

For unconfirmed curvatures, or "round shoulders," in children and youths.

This condition, brought on by a habit of stooping, or by a constant bending forward of the head and neck over the book or desk, is amendable by mechanical treatment. The most approved instruments for these cases are represented by Figs. 1, 2 and 3.

Figs. 1, 2. Elastic Shoulder Braces.

For ladies and gentlemen, arranged as SUSPENDERS or SKIRT SUPPORTERS.

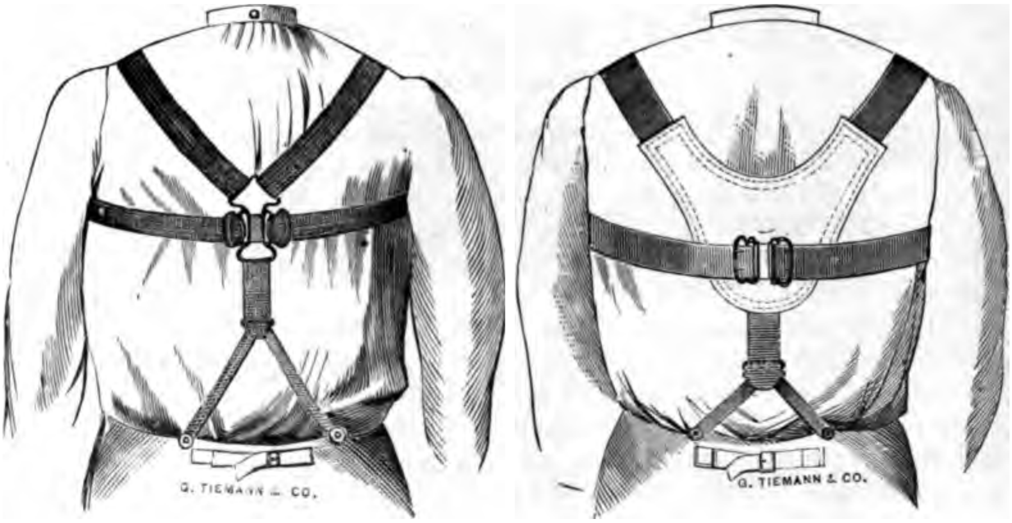
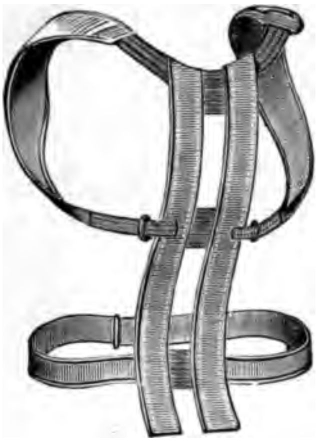

G. TIEMANN & CO.
G. TIEMANN & CO.

FIG.		PRICE.
1.	Elastic Shoulder Brace, for Gentlemen and Ladies, .	$2 00 to $3 50
2.	Elastic Shoulder Brace, for Gentlemen, . .	2 00 to 3 50

Fig. 3. Steel Back Shoulder Brace.

For more advanced cases of round shoulders. Price, $4 to $5.



Directions to Measure for Shoulder Braces:

1. Patient's name (sex).
2. Elastic or Steel-Back Brace.
3. Crest of ilium to axilla, . . inches
4. Circumference of pelvis, . . . "
5. Circumference of chest under axilla, . . . "

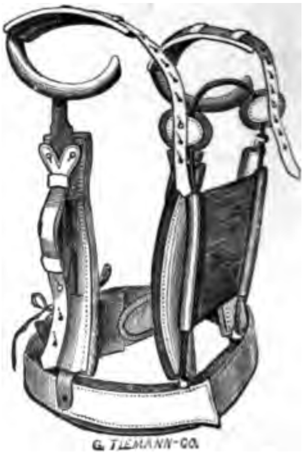
Apparatus for Spinal Distortions.

Extracted from the "Medical Journal," New York. Aug. 1, 1868.

Fig. 4.

Tiemann & Co.'s New Brace for Pott's Curvature of the Spine.

Price, $35.00.



G. TIEMANN-CO.

"It is intended to afford an entirely elastic continuous and gentle pressure to the parts to which it is applied, giving to the patient, along with adequate support, an easy and comfortable feeling. It is made of light tempered springs, and softly padded wherever it comes in contact with the body.

"The belt below passes round the pelvis, and the principal weight is thrown upon the gluteal region. The front portion is broad, so as to compress the protruding abdomen. Two upright parallel bars pass on each side of the posterior elevation, having a portion of silk elastic rubber between them, which gives a constant pressure upon the protuberance. If the latter is inflamed, a portion cut out of the elastic material prevents direct pressure upon the extremity of the bone. Upon these side bars are attached two elliptic and padded springs, yielding to every pressure, and adapting themselves to the sides of the spinal column and keeping the body in an erect position. These are removed or applied by a very simple process. The two padded crutches are elastic, and elevate the body by pressing mostly under the margin of the scapula, thus obviating any tendency to pressure upon the axillary veins. They are constructed in such a manner that the equilibrium of the body can be restored in case one shoulder is depressed."

FIG. 5.

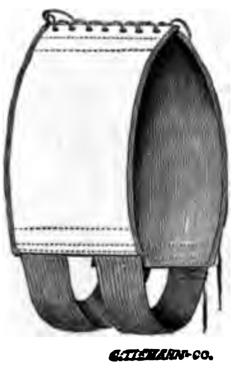

G.TIEMANN-CO.

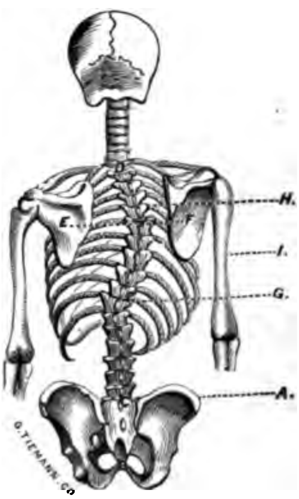
FIG. 5. "The elastic belt shown in the cut is for the purpose of giving additional pressure, if needed, but mainly to compress the sternum, which generally protrudes. It is also designed to be worn at night, when the apparatus itself is not applied."

We pay special attention to the correct and careful fitting of these Braces.

Surgeons residing at a distance, whose patients cannot visit us for adjustment, will have their orders promptly attended to, by sending us the following particulars:

Measurement for Tiemann & Co.'s Brace for Posterior Curvature.
(Pott's Disease.)

FIG. 6.



INCHES.

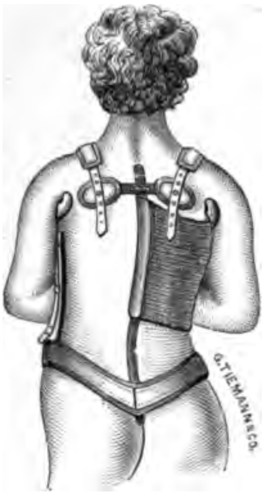
1. Patient's name (or sex).
2. " age.
3. " weight (estimated).
4. Distance from sacro lumbar articulation to vertebra prominens, . . (C to D)
5. Distance from sacro lumbar articulation to first vertebra involved, . . (C to G)
6. Distance from sacro lumbar articulation to last vertebra involved, . . (C to D)
7. Distance from crest of ilium to axilla, right side, ... (A to H)
Do. left side, "
8. Distance from the centre of one scapula to the centre of the other, . . (E to F)
9. Horizontal (transverse) diameter of the protuberance.
10. Circumference of chest under axilla, ... (H)
11. Circumference of pelvis one inch below the iliac crests.

Fig. 7. Tiemann & Co.'s Brace for Lateral Curvature.

(SCOLIOSIS.) Price, $35.00.

To the pelvic belt are attached laterally two elastic crutches, as in the brace for Pott's disease; to relieve the spine of the weight of the trunk posteriorly, a single, strong, upright bar, holding a couple of adjustible pads for the scapulæ, and just below, a leather band, of proper width (attached by a number of small brass buttons), terminating in strong elastic India-rubber webbings. This band is passed around the protuberance obliquely, and buckled to the pelvic belt in front, an inch or two beyond the linea alba, and will be found to exercise a gentle, but continuous elastic pressure, at the same time rotating the ribs around their vertebral axes, and thus unfolding the helical curve.

FIG. 7.



Measurement for Tiemann & Co.'s Brace for Lateral Curvature (Scoliosis.)

Surgeons residing at a distance, whose patients cannot visit us for adjustment, will have their orders promptly attended to, by sending us the following particulars:

Is the convexity of the curve to the right or left side? (*In the figure of the accompanying skeleton it is to the right.*)

INCHES.

1. Patient's name (or sex).
2. " age.
3. " weight (estimated).
4. Distance from sacro lumbar articulation to vertebra prominens, . . (C to D)
5. Distance from sacro lumbar articulation to first vertebra involved, . . (C to G)
6. Distance from sacro lumbar articulation to last vertebra involved, . . (C to D)
7. Distance from crest of ilium to axilla, right side, ... (A to H)
   Do. left side, "
8. Distance from the centre of one scapula to the centre of the other, . (E to F)
9. Horizontal (transverse) diameter of the protuberance.
10. Circumference of chest under axilla, (H)
11. Circumference of pelvis one inch below the iliac crests.

FIG. 8.

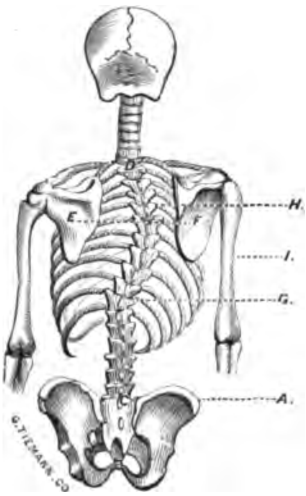


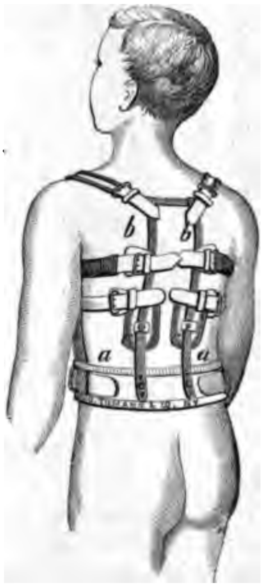
Fig. 9. Spine Brace by Dr. Chas. Washburn.

Price, $15 to $20.

"Some two years ago it became necessary for me to have constructed a brace for the treatment of angular curvature of the spine, a considerable number of such cases having been quite suddenly thrown upon my hands by the resignation of a consulting orthopedist to St. Luke's Hospital, New York. It was my desire to obtain an apparatus, which, while fulfilling the indications perfectly, should be simple in construction and not expensive."

"In the accompanying figure *aa* is a steel band which passes half way around the pelvis, just above the trochanters, *bb* are two flat bars of steel, parallel to each other, and curved upon their flattened sides to the form of the spine to which the apparatus is fitted. These bars are curved a little less than the spine, so that when secured in position, their elasticity will constantly operate to rectify the spinal curve. The cross bar at the upper ends of the parellel ones is firmly riveted to them, and is to cross the back just above the spines of the scapulæ. At the ends of this bar are affixed buckles to receive the shoulder straps; *cc* are two movable pads which slide upon the bars to which they are attached—these are best stuffed with chopped cork. These compresses are to be brought one upon each side of the projecting knuckle of spine and secured firmly by means of the screws provided for that purpose. Buckles are attached to various parts of the brace, by means of which it is secured to the front part of the apparatus, which consists, as shown, of a piece of twilled muslin, or other strong material, which covers the chest and abdomen and is provided with straps. Such parts as are in contact with the body are carefully padded."

FIG. 9.



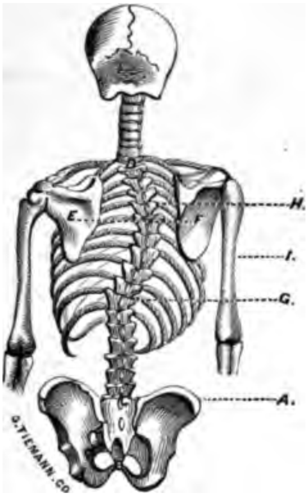
"Success with this apparatus depends entirely upon the faithfulness with which it is kept adjusted to the spine of the patient. It is only necessary that a gentle pressure should be maintained if it is constant. As the spine approaches its normal shape the curve of the brace will require to be altered from time to time. The steel has a soft temper, so that it will take the form into which it is bent when considerable power is applied, but will be sufficiently elastic for the purposes of this apparatus. With children's braces the necessary bending is readily accomplished by hand."

Surgeons residing at a distance, whose patients cannot visit us for adjustment, will have their orders promptly attended to, by sending us the following particulars:

Measurement for Washburn's Brace for Posterior Curvature of the Spine.
(Pott's Disease)

1. Patient's name (or sex.)
2. " age.
3. " weight (estimated).
4. Distance from sacro lumbar articulation to vertebra prominens (C to D), inches.
5. Distance from sacro lumbar articulation to first vertebra involved (C to G), "

FIG. 10.



	INCHES.
6. Distance from sacro lumbar articulation to last vertebra involved, .	(C to D)
7. Distance from crest of ilium to axilla, right side, . . .	(A to H)
Distance from crest of ilium to axilla, left side, . . .	"
8. Distance from the centre of one scapula to the centre of the other, .	(E to F)
9. Horizontal (transverse) diameter of the protuberance.	
10. Circumference of chest under axilla,	(H)
11. Circumference of pelvis one inch below the iliac crests.	

Fig. 11. Dr. Thomas M. Markoe's Brace for Torticollis.

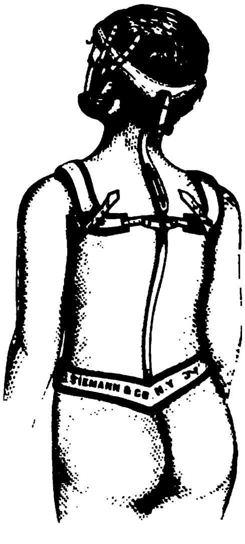
Price, $35.00 to $45.00, according to size and finish.

This apparatus is constructed in the following manner: An upright steel bar is fastened to a pelvic band, and carried along the spine to a little below the level of the shoulders, secured in position by straps passing over the shoulders under the axillæ, and fastened to buttons or pads situated over the scapulæ.

A steel lever for extension of the neck, is provided inferiorly with a slot, to admit of adjustment, and connected with the upright bar by means of two screws; the top of this lever is made to form a powerful clamp, for the purpose of holding the head-band, and of securing the head in position. The head-band is formed of a steel spring carried half around the back of the head, softly padded, and the covering extended to the front and buckled there. A strap may also be passed across the top of the head from ear to ear.

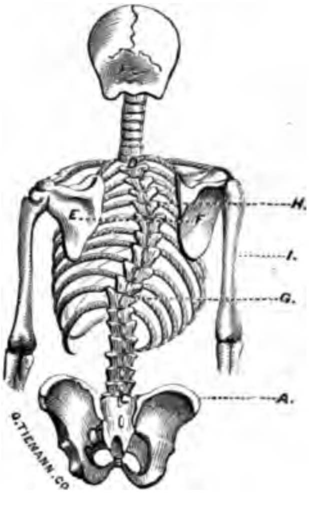
A bandage, the size and shape of the patient's chin, is buttoned to this head-band laterally with four straps. Fastened to the steel spring of the head-band is a steel stem about one inch or less in length, terminating in a ball; this is held within the grasp of the clamp, thus forming a universal joint, moving freely in all directions. By turning a thumb-screw with which the clamp is provided, the head of the patient may be fixed in any position by the arrest in the movement of the joint.

FIG. 11.


TIEMANN & CO. N.Y.

Measurement for Markoe's Brace for Torticollis.

FIG. 12.

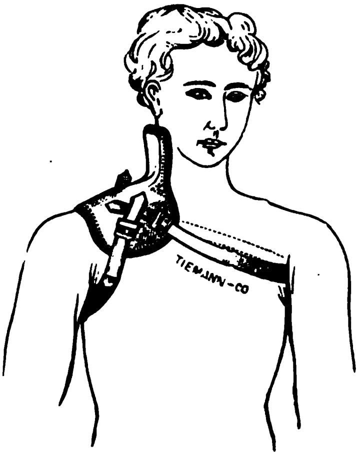


1. Patient's name (or sex).
2. " age.
3. " weight.
4. Distance from sacro lumbar articulation to vertebra prominens, . . inches.
5. Distance from sacro lumbar articulation to base of skull, . . . "
6. Circumference of pelvis one inch below iliac crest, ... "
7. Circumference of chest under axilla, . "
8. Circumference of the head, . "

Fig. 13. Tiemann & Co.'s Wry-Neck Brace.

Price, $5.00.

This is a simple collar, made of pliable iron wire and covered with silk or buckskin. It is placed on one shoulder and held in position by axillary straps. The iron admits of adjustment. It is a good instrument for slight cases of wry-neck when the head leans to one side, by reason of contractions, lesions of muscles, or burns, but when accompanied by tortuosity of the vertebra, it is not as efficient as Markoe's brace. This has been improved upon by Dr J. R. Wood. See Fig. 48, Supplement.



Measurement for Tiemann & Co's. Wry-Neck Brace.

1. Patient's name (or sex).
2. " age.
3. Head leans to *right* or *left* side?
4. Circumference of the neck, ... inches.
5. Length of the neck at side from clavicle to mastoid process, ".
6. Circumference of chest under axilla, . . . "

Fig. 14. Davis's Apparatus for Caries of the Spine.

Price, $20.

(*Extracted from Hamilton's Principles and Practice of Surgery.*)

"The principles which ought to govern the construction and application of mechanical supports, in cases of caries of the spine, are the greatest degree of lightness, compatible with the requisite firmness, accurate adaptation; pressure in opposing directions upon the spinal column, sufficient to insure support and steadiness, and to transfer, in some degree, the weight of the spinal column from the affected vertebræ to their corresponding oblique processes, while at the same time these vertebræ shall not separate from each other in a manner to defeat the end desired, namely, their final union and consolidation by callus; the pressure being so applied on either side of the spinous processes, and not upon the processes themselves, so that it shall cause the least pain and not endanger ulceration or excoriation, giving support to the tumid or pendulous belly; interfering in no way with the free motions of the arms or legs. These indications we find more or less completely fulfilled in the apparatus of Davis, Bigg, or Taylor."

FIG. 14.

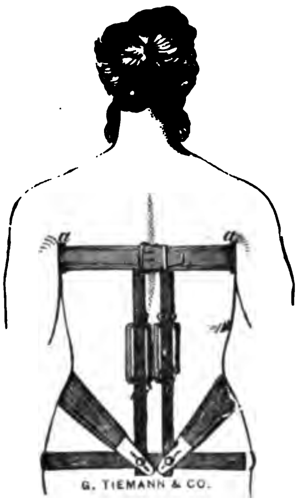

G. TIEMANN & CO.

FIG. 15.

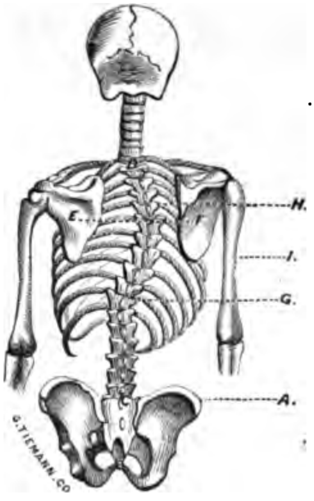


FIG. 16.

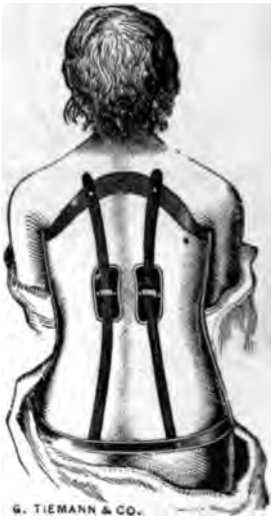

G. TIEMANN & CO.

Fig. 16. Taylor's Apparatus for Caries of the Spine.

Price, $24.00 to $30.00.

Measurement for Davis's or for Taylor's Apparatus for Caries of the Spine (Pott's Disease).

1. Patient's name (or sex)
2. " age.
3. " weight (estimated).
4. Distance from sacro lumbar articulation to vertebra prominens (C to D), *inches.*
5. Distance from sacro lumbar articulation to first vertebra involved (C to G),

6. Distance from sacrolumbar articulation to last vertebra involved (C to D), *inches.*
7. Distance from crest of ilium to axilla, right side, (A to H), . "
Do. do. left side, " . . "
8. Distance from the centre of one scapula to the centre of the other (E to F), ... "
9. Horizontal (transverse) diameter of the protuberance, . . "
10. Circumference of chest under axilla (H). . . . . "
11. Circumference of Pelvis one inch below the iliac crests, . . "

Abdominal Supporters and Trusses.

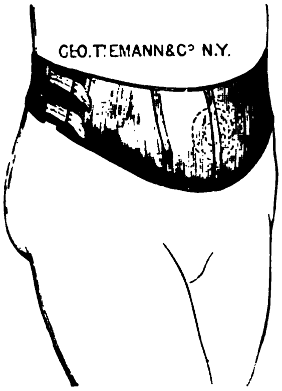
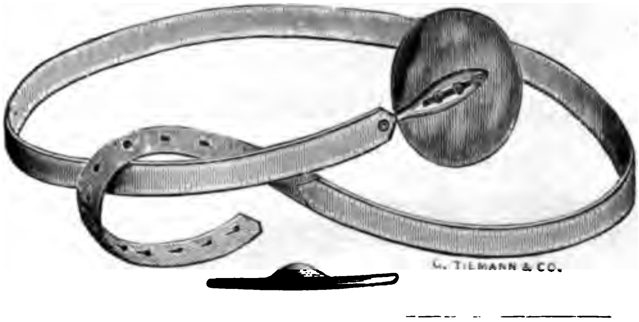

GEO. TIEMANN & Co N.Y.

Fig. 17. Umbilical Bandages.

Price, $6.00 to $8.00.

These Bandages are made of linen, satin-jean, or canvas, with hard pads of wood, cork, lead, etc., and with soft pads made of sponge, horse-hair, or of india rubber, inflated with air.

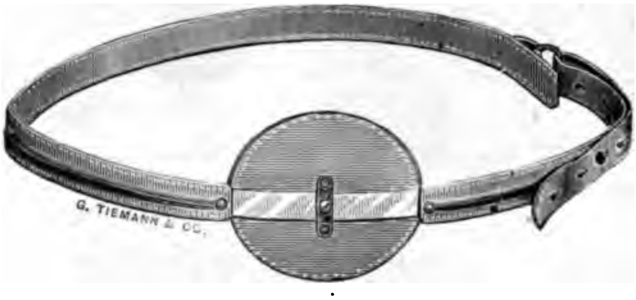
Fig. 18. Chase's Umbilical Truss.


G. TIEMANN & CO.

Price, $4.00.

Has a hard wooden pad, and is a comfortable appliance for corpulent persons, having the advantage of being light and cool, making it comfortable for summer wear.

Fig. 19. Bow Spring Umbilical Truss.


G. TIEMANN & CO.

Price, $5.00.

The spring of this truss is made in form of a bow, the convex side of which, supporting the pad, is applied to the rupture. It is forced to conform to the shape of the body by drawing on the straps on either side, which are then buckled just tight enough to comfortable. They are made with soft or hard pads.

Fig. 20. Children's Bow Spring Umbilical Truss.

Price, $2.50 to $3.00.

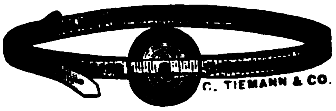
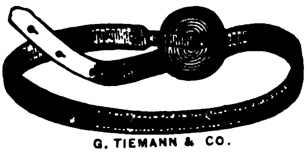

G. TIEMANN & CO.

Fig. 21. Children's Umbilical Truss.

Price, $2.50 to $3.00.

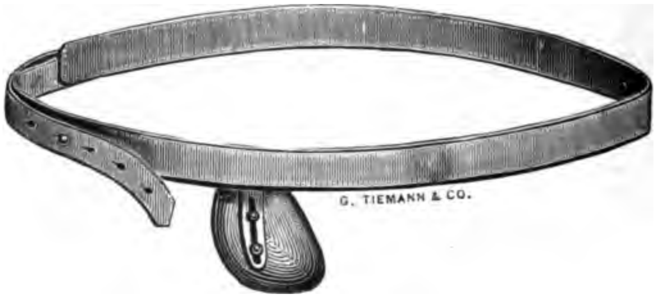

G. TIEMANN & CO.

Crescent Spring, and with Soft or Hard Pads.

CHILDREN'S UMBILICAL BANDAGES, $2.00 to $3.00.

Fig. 22. Bow Truss, Single, Wooden Pad.

Price, $3.50.


G. TIEMANN & CO.

☞ The order for an Umbilical Bandage or Truss should be accompanied the following

Measurement:

1. Diameter of the protuberance.
2. Circumference of the body at the Umbilicus.

Fig. 23. Ratchet Truss, Hard or Soft Pad.

Price, $4.50.

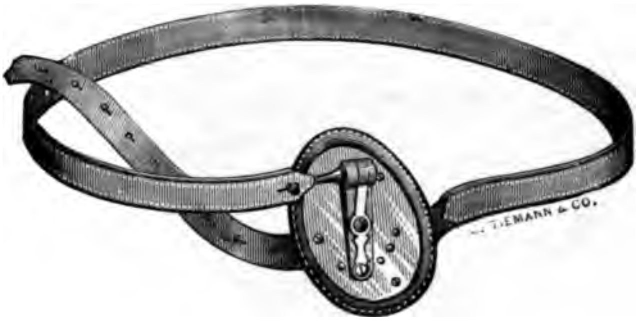

G. TIEMANN & CO.

Fig. 24. Best French Truss, Single, Soft Pad.

Price, $4.00 to $5.00.

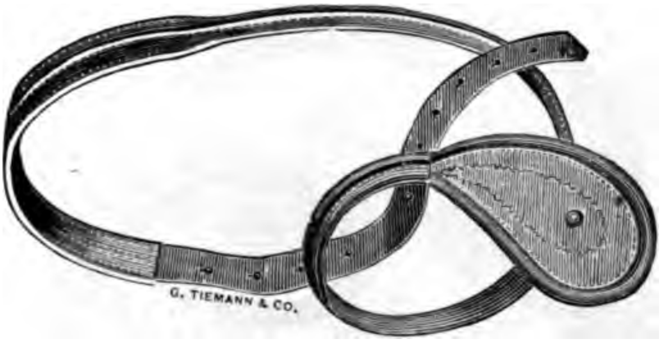
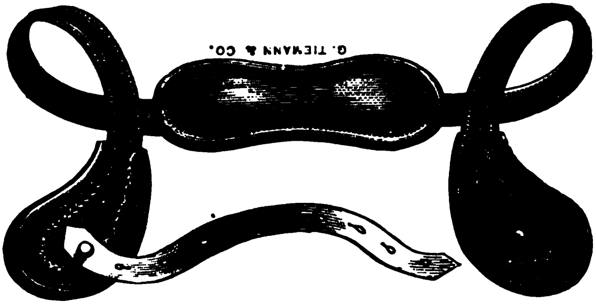

G. TIEMANN & CO.

Fig. 25. Best French Truss, Double, Soft Pad.

Price, $6.00.


G. TIEMANN & CO.

☞ For a Truss, measure around the pelvis and describe the rupture.

Trusses carefully fitted. A lady will wait on lady customers at the Branch Store, 107 East 28th Street.

Fig. 26. Chase's Truss, Cedar Pad.

Price, $4.00.

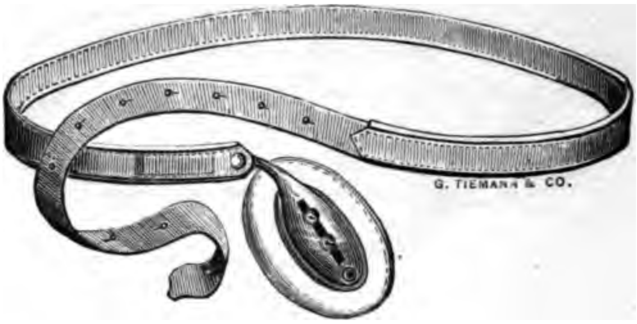

G. TIEMANN & CO.

Fig. 27. French Adjustable Truss, Soft Pad.

Price, $4.50.

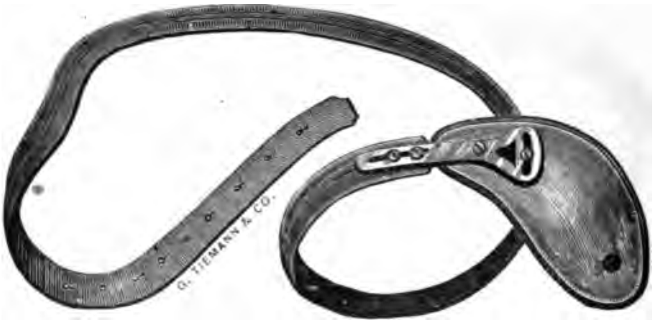
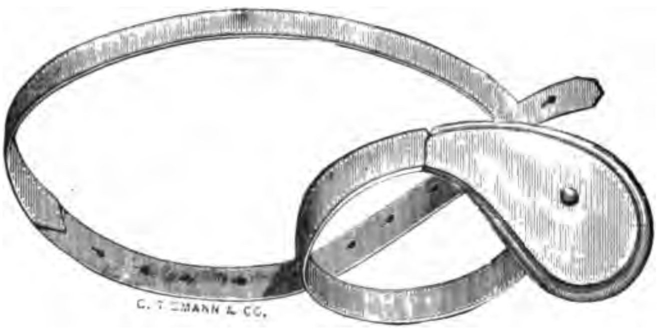

G. TIEMANN & CO.

Fig. 28. German Truss, Soft Pad.

Price: Single Truss, $3.00; Double Truss, $4.50.



☞ For a Truss, measure around the pelvis, and describe the rupture.

Trusses carefully fitted. A lady will wait on lady customers at the Bra Store, 107 East 28th Street

Fig. 29. Best Common Double Truss, Soft Pads.

Price, $4.00 to $5.00.

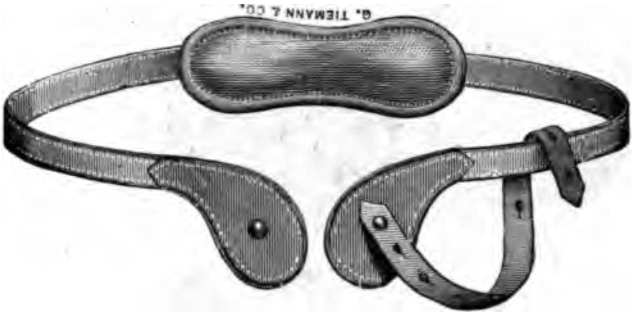

G. TIEMANN & CO.

Fig. 30. Hull's Truss, Soft Pad.

Price, $2.00.

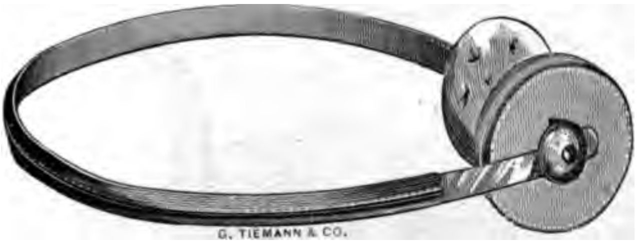
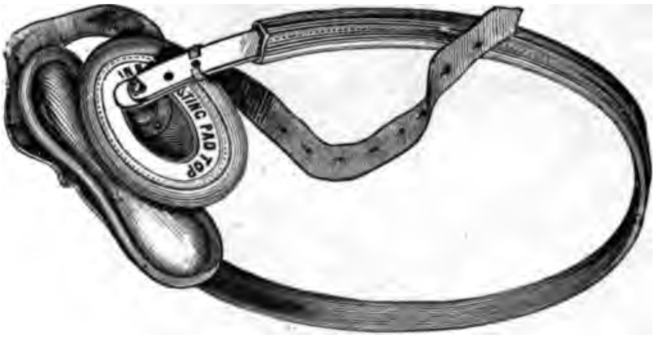

G. TIEMANN & CO.

Fig. 31. Self-Adjusting, or Ball and Socket Truss.

Single, Soft Pad. Price, $3.00 to $5.00.



☞ For a Truss, measure around the pelvis, and describe the rupture.

Trusses carefully fitted. A lady will wait on lady customers at the Branch Store, 107 East 28th Street.

Fig. 32. Self-Adjusting, or Ball and Socket Truss.

Double, Soft Pad. Price, $6.00 to $8.00.

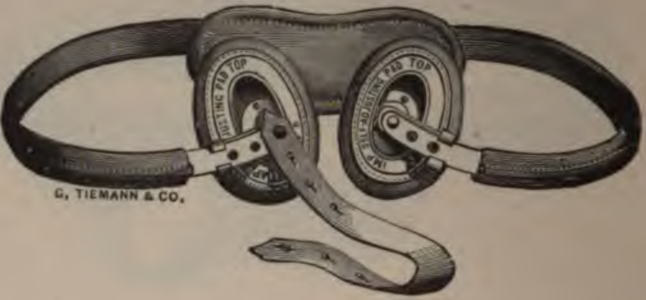


Fig. 33. French Adjustable Truss, Double, Soft Pads.

Price, $8.00.

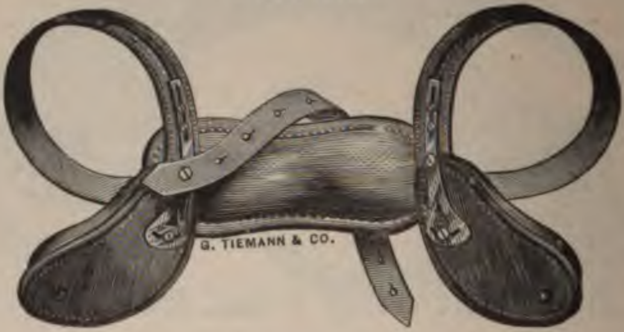
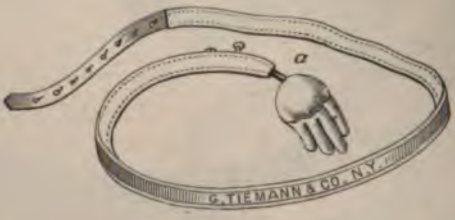

G. TIEMANN & CO.

Fig. 34. Tiemann & Co.'s Finger-Pad Truss.

Price, $5.00.

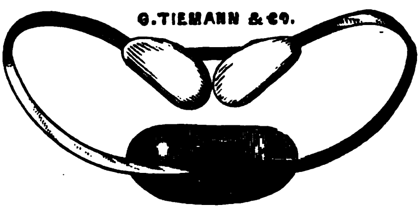


☞ For a Truss, measure around the pelvis, and describe the rupture.

Trusses carefully fitted. A lady will wait on lady customers at the Bran
Store, 107 East 28th Street.

Fig. 35. Dr. Folsom's New Truss.

Price, $20.00.


G.TIEMANN & CO.

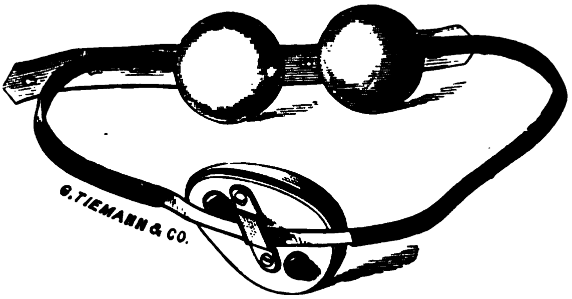
(*Extract from Medical Record, New York.*)

"This instrument consists of a back-plate of metal, which rests upon the flat surface at the upper part of the sacrum. To this are hinged two arms of steel, which curve around the pelvis just below the crest of the ilium, to avoid the action of the glutei muscles, but fitting very accurately to the shape of the body. To their extremities are attached the pads, upon which they exert such moderate pressure as will ensure safety in each particular case, without aggravating the condition intended to be relieved. The necessary adjustment of curve is, therefore, given in each case, by the hand of the surgeon, before tempering and finishing the instrument. In no other way can the same degree of firmness and efficiency be obtained. The two pads are connected by a single strap, buttoning on studs at their upper part. A double truss is used in every case of hernia."

"The Truss is plated with nickel, and instead of being covered with any absorptive material, is worn over a silk handkerchief or flannel bandage."

Fig. 36. Dr. Schuppert's Galvanic Truss.

Price, $15.00 to $20.


G.TIEMANN & CO.

☞ For a Truss, measure around the pelvis, and describe the rupture.

Trusses carefully fitted. A lady will wait on lady customers at the Branch Store, 107 **East 28th Street.**

Fig. 37. Bow Spring Abdominal Supporter.

Price, $4.00 to $5.00.

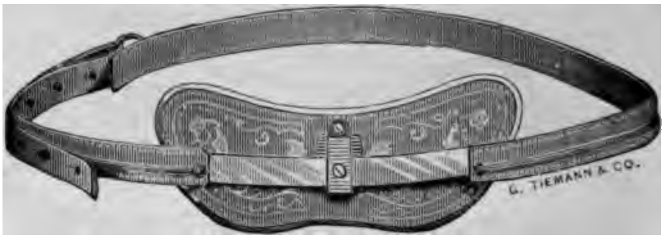


Fig. 38. Fitch's Abdominal Supporter.

Price, $4.00 to $6.00.

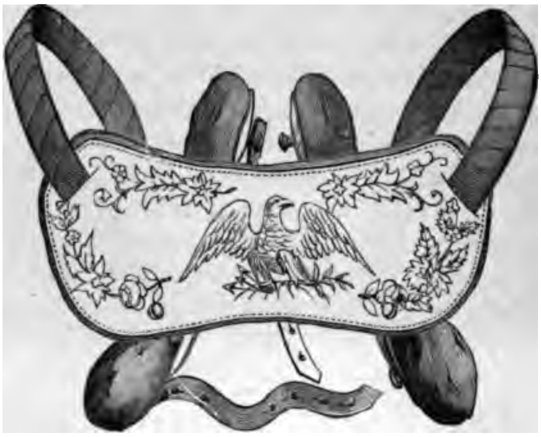
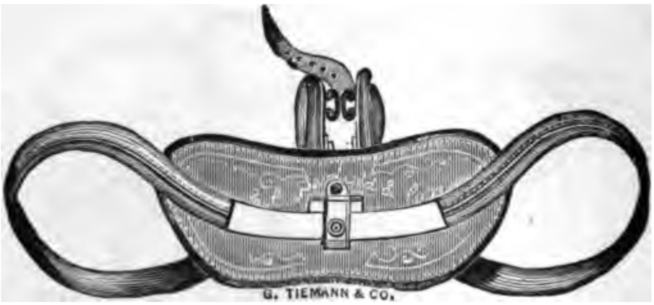


Fig. 39. Eugene Abdominal Supporter.

Price, $6.00.



☞ The order for an Abdominal Supporter should be accompanied with measure around the pelvis.

Supporters and Trusses carefully fitted. A lady will wait on lady customen the Branch Store, 107 East 28th Street.

Fig. 40. London Abdominal Supporter.

Price, $5.00.

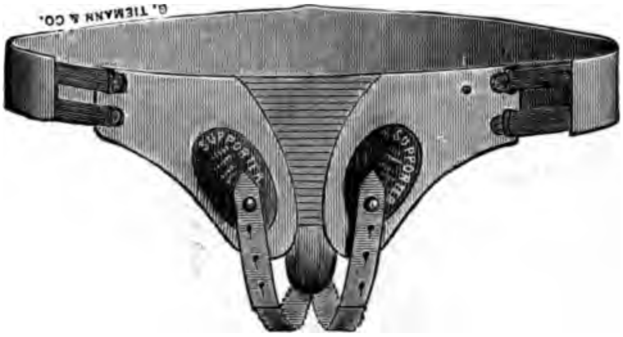


Fig. 41. Abdominal Bandage.

Price, $6.00.

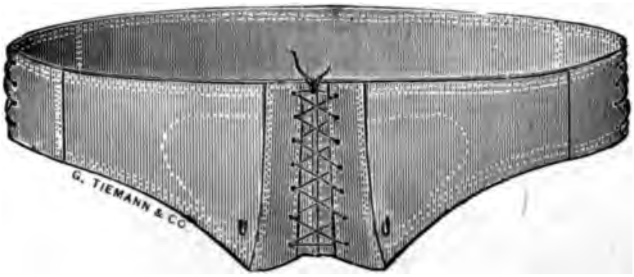
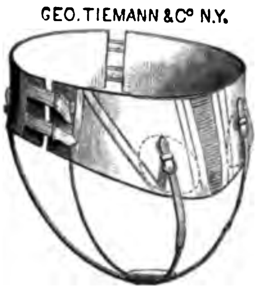


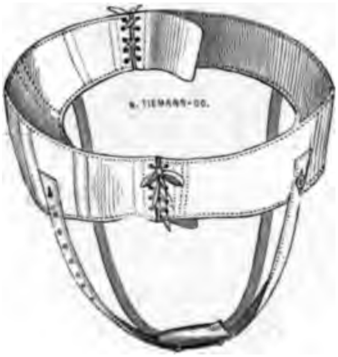
Fig. 42. Noeggerath's

Price, $ 6.00


GEO. TIEMANN &C° N.Y.

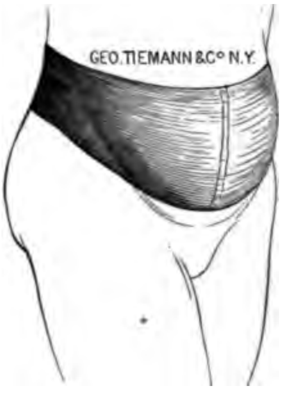
43. Thomas'

Price, $ 8.00


G. TIEMANN & CO.

44. Silk Elastic Belt.

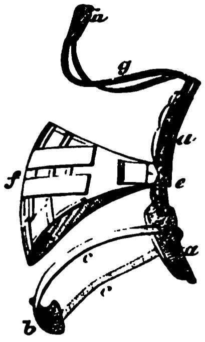
Price, $ 12.00 to 16.00

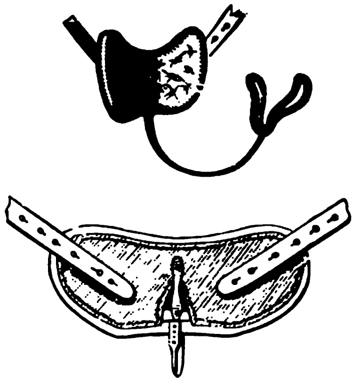

GEO. TIEMANN &C° N.Y.

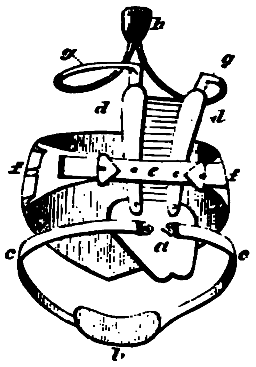
☞ The order for an Abdominal Supporter should be accompanied with the measure around the pelvis.

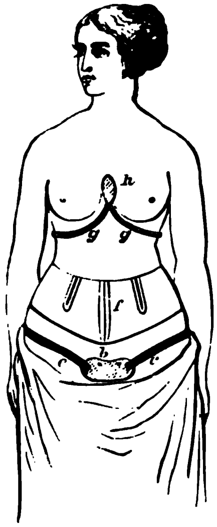
Supporters and Trusses carefully fitted. A lady will wait on lady customers at the Branch Store, 107 East 28th Street.

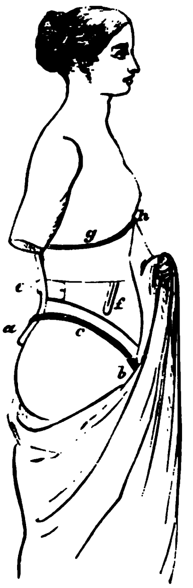
We have on hand cotton elastic abdominal belts, canvas riding belts, satin-jean abdominal belts, etc.; also Brauns', Phelps', Dugas', Scanzoni's, the Boston, and a variety of other supporters, and make to order any other pattern desired.

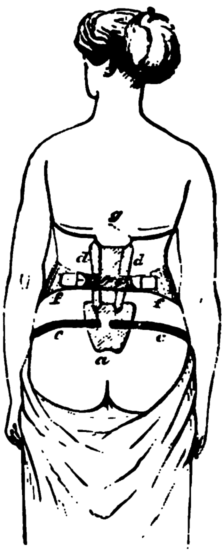












Cotton Elastic Abdominal Belt,	Price,	8.00
Braun's Abdominal Supporters,		6.00
Phelps' Abdominal Supporter,		5.00
Dugas' Abdominal Supporter,		5.00
Boston Abdominal Supporter,		6.00
Riding Belts, with stays, lined with chamois,		5.00
Canvas Abdominal Belts,		4.00
Satin-jean Abdominal Belt,		6.00

Measurement for Supporters:

1. Circumference at the iliac crests, - - inches.

Supporters and Trusses carefully fitted. A lady will wait on lady customers at the Branch Store, 107 East 28th Street.

Fig. 45. Prolapsus Ani and Pile Supporter.

Price, $ 8.00.

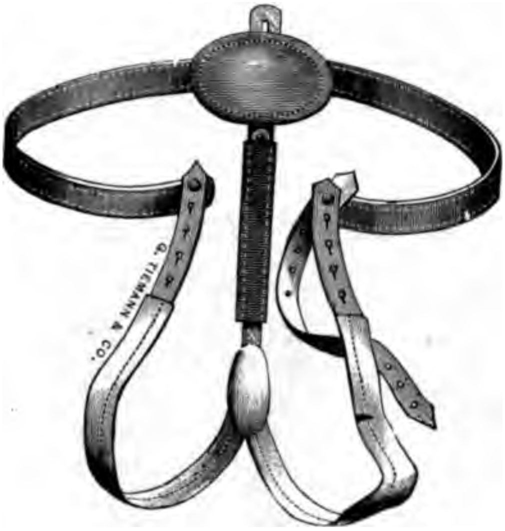
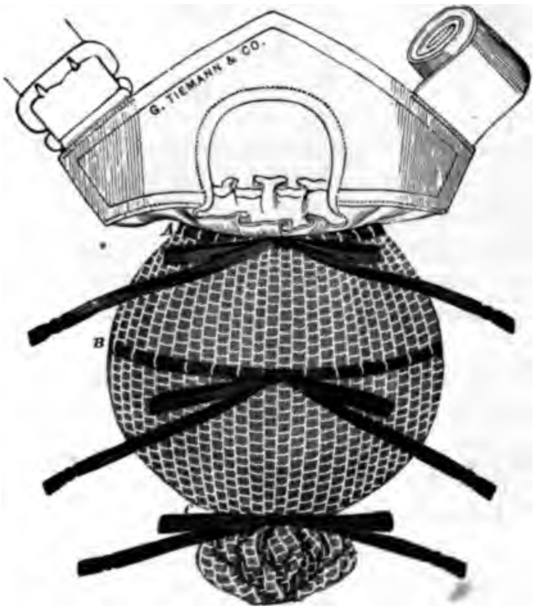

G. TIEMANN & CO.

Fig. 46.

Miliano's Compressor for Varicocele, Swelling, etc., of the Testes.



We keep in store a large assortment of Suspensory Bandages of all kinds and patterns, made of silk, linen, cotton, leather, etc.

SUSPENSORY BANDAGES.

		PRICE
46.	Miliano's Compressor for Varicocele, etc.,	$ 2.00
	Cotton Suspensory Bandage,	.50 to .75
	Linen Suspensory Bandage,	.75 to 1.25
	Silk Suspensory Bandage,	1.50 to 5.00
	Elastic Suspensory Bandages,	2.00 to 5.00

Figs. 47, 48, 49, 50. Urinals for Incontinence.

FIG. 47.

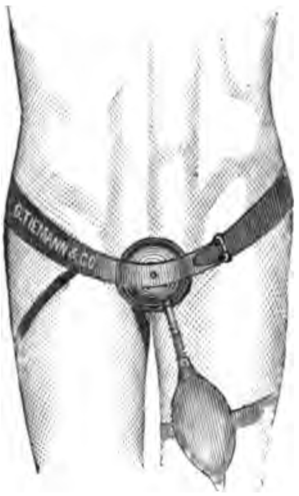


FIG. 48.

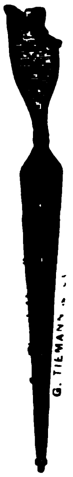


FIG. 49.

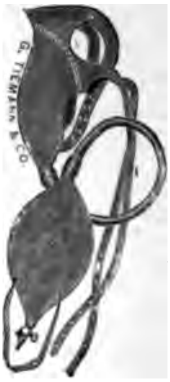


FIG. 50.

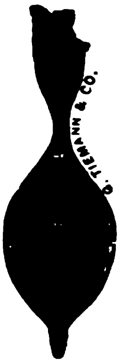


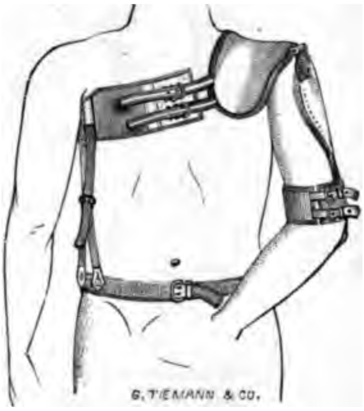
FIG. 47 is Tiemann & Co.'s instrument for inverted (Extrophy of) bladder. It consists of a metallic or hard rubber shield, to the lower extremity of which is attached an elastic tube leading to a soft rubber pouch, to collect the urine. This is buckled to the thigh, or may be carried down to the boot. FIGS. 48, 49, 50, represent soft rubber urinals for incontinence of urine. We have various other patterns for males and females of English, French and American make.

47.	Tiemann & Co's Instrument for Extrophy of the Bladder,	25.00 to 75.00
48.	India Rubber Urinal, male, plain,	2.50
	The same, male, best,	4.00
49.	India Rubber Urinal, male or female,	4.50 to 9.00
50.	India Rubber Urinal, male,	2.50 to 5.00

Fig. 51 Apparatus for Un-united Fracture, of the Humerus.

Price, $35.00 to $70.00.

The object of this instrument is to restore an arm to usefulness, which has been deprived of the power of motion by reason of ununited fracture, or of resection of the humerus. This is accomplished by substituting an external lever, upon which the muscles can act, for the injured bone.


G. TIEMANN & CO.

A brass cap, well padded, is accurately fitted to the shoulder, and kept in place by axillary straps and suspenders. To this cap we attach, by means of a sort of universal joint, a concave steel bar, covered with leather, fitting the arm, and buckled thereto, just above the elbow-joint, and as high up as may be necessary. With the aid of this apparatus a person can use his arm in many directions. In order to make this apparatus fit well, the patient must either visit us for adjustment, or, if this is inconvenient, the surgical attendant must send us an accurate plaster-paris cast of the shoulder, and the following information and

MEASUREMENTS:

1. Patient's name (or sex).
2. Right or left arm? INCHES.
3. Length of the arm from axilla to forearm when flexed,
4. Length from shoulder to elbow, . . .
5. Circumference of the arm above the elbow, .
6. Circumference of chest under axillæ, . . .

Fig. 52. A Substitute for the Hand.

BY DAVID PRINCE, M. D., Jacksonville, Ill.

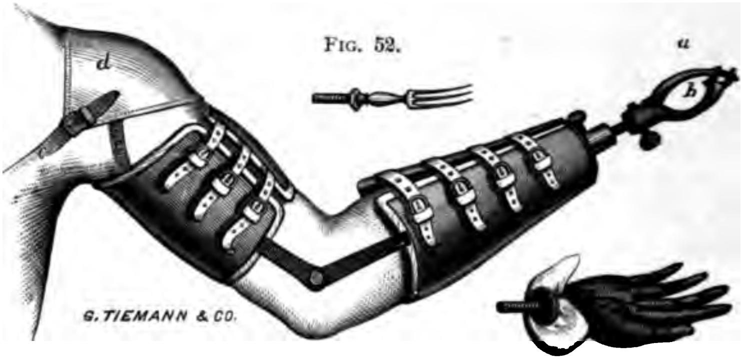
Price, $60.00.

(From *Medical Record*, N. Y.)

"It has been a desideratum to provide a substitute for the hand which will enable a person to hold a pen or pencil, and with the same instrument to grasp the handle of a hoe or shovel. In 1864 I explained my plan to Mr. Stohlmann, of the firm of Tiemann & Co., of New York. Mr. Stohlmann entered with enthusiasm into the idea and produced an instrument which combined the two points of usefulness, the capability of grasping small objects like pins and pencils, and objects of considerable size, like the handle of an axe or hammer, a whip, &c.

A conception of the instrument will readily be obtained by a glance at the cut. The apparatus *a* is fastened to the investment of the limb by means of a screw, and, by aid of the other hand, it may readily be replaced by a fork, if it is not preferred to hold the fork in the grasp of the instrument, or a gloved hand can be screwed on in place of the useful instrument.

FIG. 52.



The fenestrum *b* is for holding a whip or hammer, and its size is regulated by a screw so as to fit objects of different sizes. Small objects are held in the fork at the ends of the apparatus, and by screwing down more or less the lever which constitutes one side of the fenestrum, the grasp can be accommodated to the size of a needle or a pencil.

The instrument is represented in the cut as not quite closed, for small objects.

The screw, which constitutes the shank of the instrument, is so arranged that it can be made stationary, a necessary condition in holding a whip or a hammer, or left to rotate, as would be necessary in holding the handle of a plough.

It will be seen that the instrument has great variety of adaption.

There are elastic straps *cc* attached to the investment of the arm, and to a shoulder-cap *d*, and passed around the chest to prevent the whole apparatus from sliding off in pulling or in carrying a weight.

The instrument is very far from being an adequate substitute for the natural hand, but it is believed that it combines the utility of a grasp for large objects combined with the capability of holding small things better than any instrument which has yet been devised."

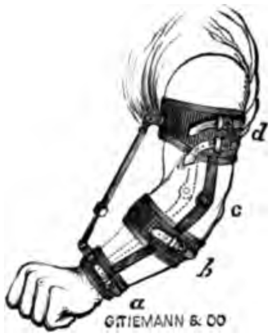
An order for Prince's Substitute for the Hand should be accompanied by the following:

MEASUREMENT:

1. Right or left arm. INCHES.
2. Distance from shoulder to elbow, ... “
3. Distance from elbow to the extremity of stump, “
4. Distance from axilla to elbow, ... “
5. Distance from axilla to extremity of stump, . . “
6. Circumference of wrist, ... “
7. Circumference of forearm, ... “
8. Circumference of arm, ... “
9. Circumference of chest, ... “
10. Length of the sound arm, ... “
11. A pencil sketch of the size of sound hand.

Fig. 53. Apparatus for False Anchylosis of the Elbow-joint.

Price, $18.00.



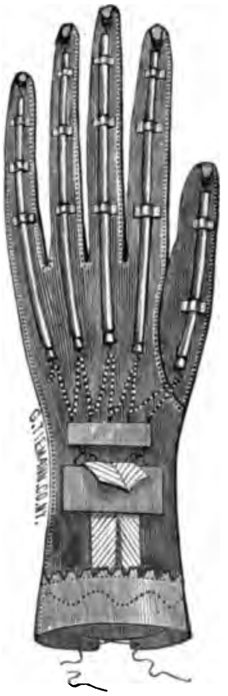
The apparatus here represented is for the gradual extension of contracted muscles. By persistent and daily passive and active exercise, a flexible and useful joint may be restored. It may also be used for forcible breaking up of false anchylosis, if the surgeon prefers this to gradual extension. It forms also a safeguard against malposition, for should it be deemed impossible to effect a cure, the arm may be fixed in such a position to anchylose as shall give it the greatest usefulness.

DESCRIPTION AND MEASUREMENT.

	INCHES.
1. Right or Left Arm.	
2. Length from wrist to elbow-joint (*A to C*), . . .	"
3. Length from wrist to axilla (*A to D*), . .	"
4. Circumference of wrist (*A*), ...	"
5. Circumference of forearm (*B*), ...	"
6. Circumference of elbow-joint (*C*), . . .	"
7. Circumference of arm (*D*), ...	"

Fig. 54. Glove for Paralysis of the Hand and Fingers.

Price, $20.00 to $30.00.



This apparatus, made of strong yet pliable material, reaches about two inches above the wrist, and is arranged to lace snugly, to prevent displacement.

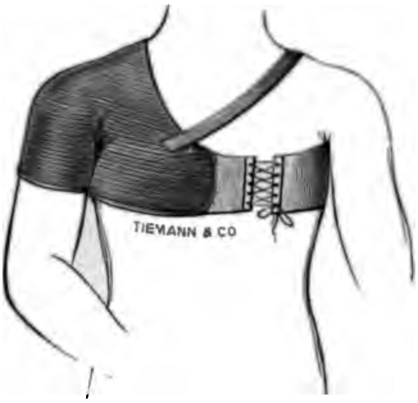
Five india-rubber cords, acting as artificial extensors, are distributed along the back of the fingers and thumb. The ends of these cords are provided with hooks which take hold of loops at the extremities of the fingers and thumb, and of chains connected to straps at the wrist. These artificial muscles act independently one of the other, and their strength can be regulated by hooking them to the chains so as to make them more or less tense. They are passed through loops to prevent their slipping out of place.

DESCRIPTION AND MEASUREMENT.

1. Right or left hand.
2. Lay the hand on a sheet of paper and *trace* the out lines with pencil, as far as the glove is to reach.
3. Circumference of the wrist.
4. Circumference of the hand anterior to the thumb.

Fig. 55. Apparatus for Preventing Dislocation of Shoulder-joint.

Price, $6.00 to $9.00.



This apparatus is to be worn after reduction of a dislocated humerus, to guard against a recurrence, and also for the purpose of relieving permanent dislocation arising from a laxity of the ligaments, or from paralysis of the deltoid and scapular muscles. It is made of satin-jean with a leather shoulder-cap.

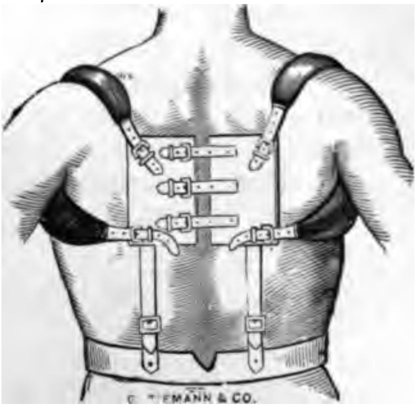
DIRECTIONS FOR MEASUREMENT.

1. Patient's name.
2. Patient's weight (estimated).
3. Right or left shoulder.
4. Circumference of the arm.
5. Circumference axilla to acromion.
6. Circumference of chest under axilla.

DISLOCATION AT THE SHOULDER-JOINT.—Dislocation at the shoulder may be very conveniently reduced by causing the patient to mount to a convenient height on some "steps," placing his arms across the top step, upon which is placed a pillow. The top step acts as fulcrum, and the weight of the patient's body answers to a great extent as counter-extension.—*Dr. G. Hamilton.*

Fig. 56. Sir Astley Cooper's Apparatus for Dislocated Clavicle.

Price, $5.00.

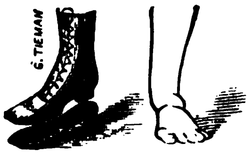

G. TIEMANN & CO.

Supporters and Trusses carefully fitted. A lady will wait on lady customers at the Branch Store, 107 East 28th Street.

Apparatus for the Treatment of Deformities and Debilities of the Lower Extremities.

Fig. 57. Extension for a Short Leg.

Price, of brace, $9.00.*



For a short leg, the result of infantile paralysis, when the bones have not kept pace in growth with those of the corresponding extremity, we make an extension to correct the patient's limp, and to guard against the danger of spinal curvature. The apparatus consists of a steel frame of proper height, securely fastened under a plain shoe. The steel base has a leather sole attached, to avoid noise when walking on pavements, stone or wooden floors, and to prevent falling on slippery ground. These extensions are light and comfortable. See also Figs. 58 and 59.

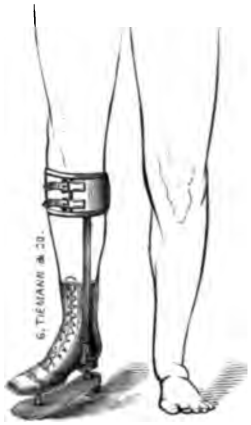
DIRECTIONS FOR MEASUREMENT.

1. Have the patient (both feet bare) stand up, place books or blocks of wood under the short foot until the shoulders and pelvis are in a horizontal plane, then measure these books or blocks, which will be the height required for extension.
2. Send us a well-fitting shoe.
3. Right or left leg?

Fig. 58.

Extension for a Short Leg and Brace for Weak Ankle combined.

Price, of brace, $18.00.*


G. TIEMANN & CO.

If shortness of a leg is accompanied with inability to bear the weight of the body, the muscles being too weak to keep the ankle straight, the simple contrivance described (Fig. 57) is not sufficient, and the apparatus, as shown by Fig. 58, will be required to support the joint. (This is in reality the apparatus Fig. 57 and Fig. 60, combined.)

DIRECTIONS FOR MEASUREMENT.

1. Heighth of the extension as directed for Fig. 57.
2. Right or left leg? INCHES.
3. Distance from sole to ankle-joint. . . "
4. Distance from sole to calf, . . "
5. Circumference of calf, . . . "
6. Send us a well-fitting laced shoe.

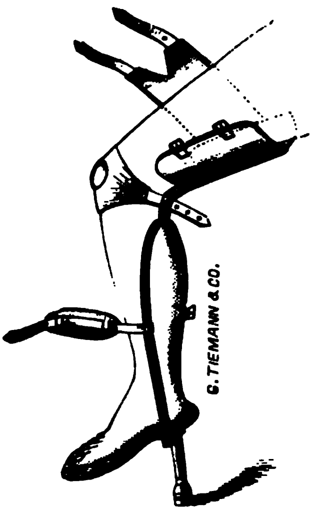
If we are to furnish shoes, send the following measure:

a Length of sole of foot, *b* Circumference of ball of foot,
c Circumference of instep, *d* Circumference above the ankle,

* Shoes are charged extra, according to quality.

Fig. 59. Bigg's Instrument for Short Leg.

Price, $85.00.

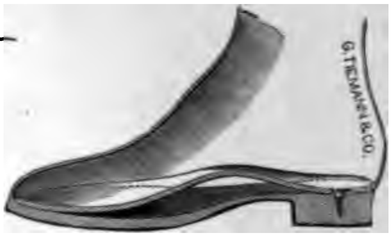

G. TIEMANN & CO.

This instrument is very useful where shortening of the limb is the result of anchylosis of the knee-joint. It is a modification of Bigg's, and consists of a thigh trough, well padded, and attached to a strong steel stem, bifurcating below the knee, and running down the side of the leg, terminating in a socket which is filled up with a rubber bottom to rest on the ground. The thigh is secured into the apparatus by straps and buckles. The weight of the body is transmitted to the ground by the side stems in a vertical line, without straining the knee. For further comfort, the knee may be kept in place by a knee-cap. A strap is passed over the middle of the leg, whilst the foot rests on a swiveled plate placed between the bifurcated stem.

Directions for Measurement.

1. Patient's name.
2. Right or left leg? INCHES.
3. Length from sole of foot to knee-joint, ... "
4. Length from knee-joint to upper third of thigh, . "
5. Circumference of the thigh, ... "
6. Circumference of the calf, ... "
7. Degrees of the angle of flexion, ... "
8. Distance from the heel of the patient's shoe to the ground when standing erect, ... "

Fig. 59b. Steel Soles for Flat Feet.


G. TIEMANN & CO.

Price for one sole, $2.50.
Price for a pair, $5.00.

For flat feet we make a plain steel sole well tempered, and shaped to approach an ideal arch of a foot. These soles are covered with buckskin and fastened inside of a common shoe with a single screw. They afford a person afflicted with flat feet immediate relief They should be thin to yield a little, but strong enough to keep the bones arched. In ordering the steel sole for flat feet, state if they are wanted for the right, left, or both feet and send the shoes or outlines of the soles of the shoes traced on paper.

Fig. 60. Apparatus for the Support of Weak Ankles.

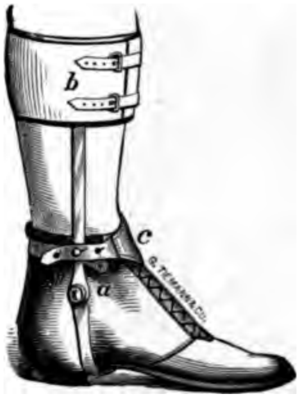
Price of a brace, for one leg only, $8. to $10.00
Price for a pair of Braces, $16. to $20.00

☞ Shoes are charged extra according to the quality.

These instruments are used to maintain the position of the foot, after the relief of valgus or varus by the regular clubfoot shoe, and also for correcting simple lateral inversion or eversion of the ankle-joint, resembling varus or valgus, commonly called weak ankle.

We attach, by means of three rivets, to the sole of a common laced shoe, a lateral stem, jointed at the ankle (*a*), passing as high as the centre of the calf, and here fixed to a band (*b*).

The ankle is supported and kept in its corrected posture by a triangular V-shaped leather strap (*c*) acting against and buttoned to the steel stem on the opposite side.



The best direction for selecting the side on which the instrument should be applied, is, that if the outer ankle has a tendency to eversion, the apparatus should invariably be placed to the inner side, and vice versa.

In obstinate cases it is made with double stems, in order to give greater security, and to keep the sole in a strictly horizontal plane; the ankle may be further protected by a small round soft pad, to prevent chafing against the steel.

In ordering the apparatus, send the description and measurements as directed on the next page for apparatus, Fig. 62.

Fig. 61. Talipes Equinus.

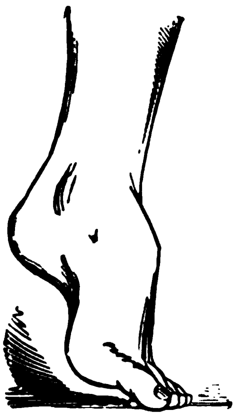


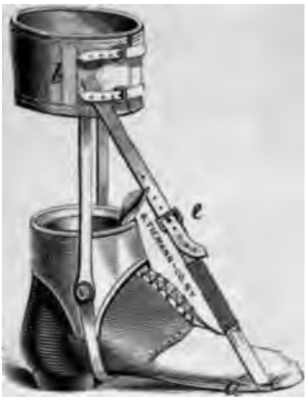
Fig. 62.

Apparatus for Weak Ankle and Contracted Tendo Achillis.

Price of a brace, for only one leg, $8 to $12.00
Price of a pair of braces, $16 to $24.00

☞ **Shoes are charged extra according to quality.**

(TALIPES EQUINUS.)



Should there be **contraction of the tendo achillis**, and consequent **dropping of the toes, it is conveniently** corrected by means of **an artificial elastic muscle, one** end of which is **fastened to the sole of the shoe (Fig. 62)**, the other to the calf-band (*b*); it may **be regulated to** any **degree of tension by means of a buckle (*e*).**

In ordering the **apparatus, send the following description** and **measurements:**

1. Patient's name (or sex).
2. Patient's age
3. Weak ankle, resembling **varus or valgus?**
4. Right, left, or both feet?
5. Tendo achillis **contracted?** INCHES.
6. Length from sole of foot to **ankle-joint,** "
7. Length from sole of foot to **calf,** - "
8. Circumference of calf, - - - "

If you wish us to furnish shoes, send the following **additional measurements:**

9. Length of sole of foot. - - - - - - "
10. Circumference of ball of foot, - - - - - - "
11. Circumference of instep, - - - - - - - "
12. Circumference above ankle, - - - - - - "

Tenotomes.

See Figs. 22, 23, 24, 25. Part. I.

We believe it is in cases of *talipes equinus*, that the best **results of tenotomy are** seen. Speaking of this operation, Mr. Liston says in his **"Practical Surgery,"**—

"Twenty-five instances of division of the tendon have come under **our care** within the last six or eight months, and an almost uniform success **has followed** the practice pursued. In some a rapid cure was effected, and in all marked **good effects** followed. Even in the most unfavorable instances, when the deformity **was both** great and of long standing, the application of proper apparatus within **a week or** two after the operation, produced a more decided improvement in the **form of the** limb in two or three months than usually follows the adaption of **mechanical means** alone in twice as many years."

Fig. 63. Improved Clubfoot Apparatus for Talipes Varus.

Price of a single shoe, complete, $10. to $14.00.
Price of a pair of shoes, complete, $20. to $28.00, according to size.

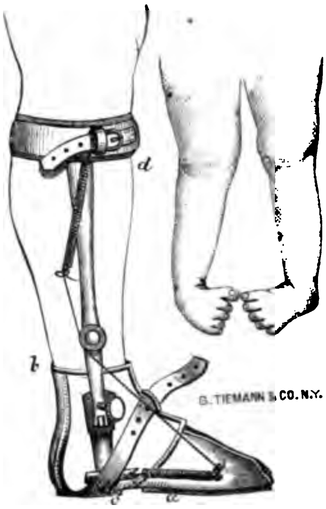
Extract from the "Medical Record," New York, Aug. 16th, 1839.

"The following is a description of a very neat, effective, and comparatively cheap apparatus for talipes, devised by Messrs. Geo. Tiemann & Co., instrument makers in this city.

"The sole of this strong leather shoe is of metal, with a joint near the heel, allowing lateral motion. A strong and durable spiral spring, as shown in the cut (*a*), draws the foot outward by a constant, elastic, and easy traction. This pressure is increased or decreased at will, by fastening the spring in a series of sockets (*c*).

"The single outside upright steel bar, with joints at the ankle, is fastened round the limb below the knee-joint, and so constructed that the screw at the ankle-joint forces the foot flat upon the floor, which foot in almost all cases is turned under as indicated by the sketch. The spiral spring (*d*), attached to a catgut cord and fastened near the toes upon the outside of the foot, elevates the toes and stretches the tendo achillis, thus drawing the foot to its natural position.

"The shoe is well padded, and as there is no metal in the heel-cap, no excoriation is occasioned. The contraction of the leather above the heel prevents the shoe from slipping off (always so difficult to retain in fleshy infants). The straps round the instep depress any undue prominence of the arch of the foot, and within the shoe a broad and well-padded tongue keeps the toes flat upon the sole of the shoe. This apparatus resembles much the regular shoe, and shows no deformed appearance."



A very simple and light night shoe, to keep the foot in the same position gained by the above shoe during the day-time, is of much service.

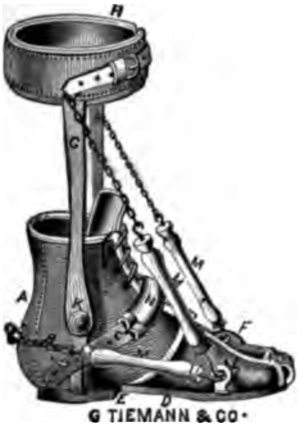
For TALIPES VALGUS, the same principle, but with reversed action is applied.

In ordering the above shoe, please send the following measurements:

INCHES.
1. Length of sole of foot, - - - - - - - "
2. Circumference of calf (*d*), - - - - - - "
3. Circumference of instep (*c*), - - - - - "
4. Circumference of ball of foot (*a*). - - - - - "
5. Circumference above ankle (*b*), - - - - "
6. Length from sole to upper part of calf (*d*) - - "
7. Right or left foot?
8. Talipes—varus or valgus?

Fig. 64. Dr. L. A. Sayres' Improved Ball and Socket Clubfoot Shoe.

Price of a single Shoe, complete, $10. to 14.00.
Price of a pair of Shoes, complete, $20. to 28.00, according to size.



The accompanying drawing (Fig. 64) and explanations give a very correct idea of its construction and modes of action. A cushioned iron cap to receive the heel, the leather covering of which is carried over the instep and ankle, and fastened by lacing. Elastic tubing (N) to go in front of the ankle-joint, to further secure the heel in position, and fastening at (*C*) an iron hook on outside of heel-cap. Sole of shoe (*D*), cushioned, and laced securely in front of the medio-tarsal articulation. Ball and socket-joint (*E*), connecting sole with heel. Elevated plate of iron (*F*), properly cushioned, to make pressure against base of first metatarsal bone. Steel bars (*G*), connecting the shoe with strap (*H*) to go around the calf. Joint (*K*) opposite the ankle. Stationary hooks (*L*), opposite the toes, for attaching the india-rubber muscles (*M M M*). These india-rubber tubes have chains attached, and are for the purpose of making flexion and eversion.

This shoe has been made more comfortable and convenient by a slight heel, and by making the upper leather nearly like that of an ordinary shoe, and not so clumsy as the primitive clubfoot shoe. The upper leather adapts itself more perfectly by lacing than if arranged with straps and buckles. This shoe, as pictured above, is arranged for valgus or varus. There is really no essential difference, only observe the principle to apply the artificial muscles in such position as shall best supply the place of those paralyzed.

MEASUREMENTS:

1. Length of sole of foot, ... *Inches.*
2. Circumference of calf, ... "
3. Circumference of instep, ... "
4. Circumference of ball of foot, ... "
5. Circumference above ankle, ... "
6. Length from sole to upper part of calf, . . . "
7. Right or left foot?
8. Talipes—varus or valgus?

Sayres'

Chains and Tin Splints always on hand, Fig. 76. Hip-joint Splints, Fig. 82.
Rubber Tubing for Artificial Muscles, per foot, 12 cents.
Knee-joints, Fig. 93, and Ankle-joint Splints, Fig. 98, always on hand.
Wire Loops and Hooks, price each 10 cents.

Fig. 65. Talipes Valgus.

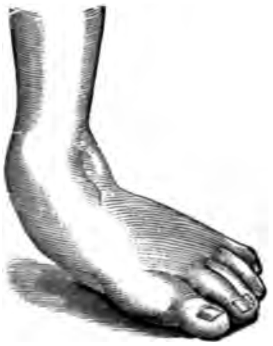


Fig. 66. Talipes Calcaneus.

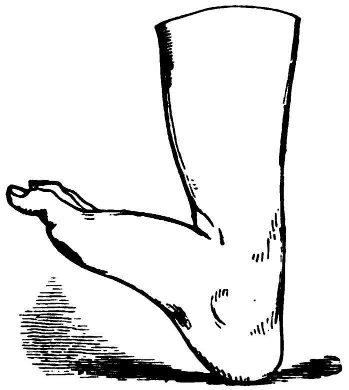
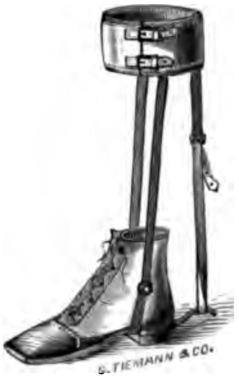


Fig. 67. Apparatus for Talipes Calcaneus.

Price for a brace, for one leg only, $10. to $12.
Price for a pair of braces, $20. to $24.



This instrument consists of a pair of steel stems, fastened to a shoe, provided with joints at the ankle, and secured to the leg with a calf-band. A strong elastic cord, or webbing, is fastened posteriorly to the calf-band above, and to a spur-like piece of steel at the heel of the shoe below. By drawing this cord tight, the uplifted sole is faced downward, and the strain on the tendo achillis is diminished; at same time the contracted muscles in front of the leg are extended.

Fig. 68. Apparatus for Talipes Calcaneus.

Price of a brace, for one leg only, $10. to $12.
Price of a pair of braces, $20. to $23.

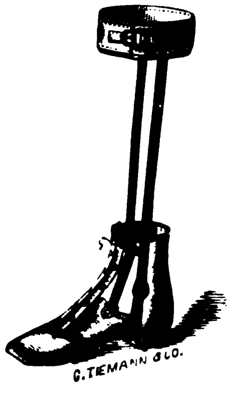


Fig. 68, shows the same apparatus with this difference: instead of the cord, or elastic webbing contracting posteriorly in Fig. 67, we have a STEEL SPIRAL SPRING, placed on a pivot and playing between brackets of the leg and ankle stem, to depress the front part of the foot by extension. There is not so much danger of falling with this apparatus, when descending stairs, the spurs, shown in Fig. 67, being dispensed with.

Measures for figs. 67 and 68, see next page.

☞ Shoes are charged extra according to quality.

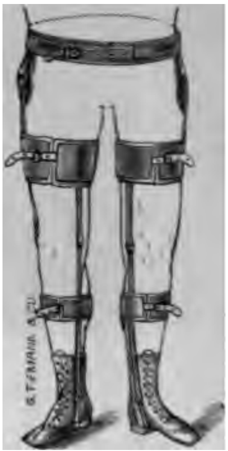
1. **Patient's name.**
2. **Patient's weight.**
3. **Patient's age.**
4. **Right or left foot.** *Inches.*
5. **Length from sole to ankle-joint,** . . . . "
6. **Length from sole to calf,** . . . . . "
7. **Circumference of calf,** . . . . . "

If we are to furnish shoes, the following **measures are required in addition:**

a **Length of the foot,** . . . *Inches.*
b **Circumference of ball of foot,** . . . "
c **Circumference of instep,** . . . . "
d **Circumference of ankle,** . . . . . "

Fig. 69. Apparatus for the Support of Weak Legs.

Price of Apparatus for adults, **$35. to $70.00.**
Price of Apparatus for children, **$25. to $35.00.**



This apparatus is for the support of weak legs, when, by reason of relaxed joints, softening of the osseous structure, or partial paralysis, they cannot quite bear the weight of the body; but where the muscles still retain some power to perform their respective functions. Very light steel springs are secured to shoes, and carried up the sides of the legs and to the pelvis. They are provided with joints corresponding to the natural ones and secured to calf, thigh, and pelvis by well-padded bands and buckles. Measures required:

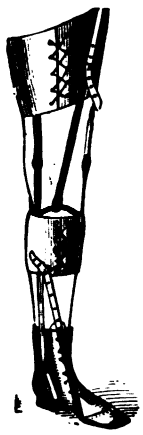
1. Patient's name.
2. Patient's age. *Inches.*
3. Length from sole of foot to ankle-joint,. . . "
4. Length from sole of foot to knee-joint, . . . "
5. Length from sole of foot to hip-joint, ... "
6. Length from sole of foot to iliac crests, . . . "
7. Circumference of pelvis one inch below iliac crests, . "
8. Circumference of thigh, ... "
9. Circumference of calf, ... "

Send well-fitting laced shoes, or if you wish us to furnish them, the followi measurements:

a Length of sole of foot, ... *Inches.*
b Circumference of ball of foot, ... "
c Circumference of instep, ... "
d Circumference above ankle, ... "

☞ Shoes charged extra, according to quality.

Fig. 70. Apparatus for Partial Paralysis of the Leg or Thigh.



Price of the apparatus for one leg, full length, as shown in fig. 70, $25. to $30.

Price of the apparatus, for both legs, full length, $30. to $60.

According to size and workmanship. Shoes extra.

In cases of wasting palsy, or when certain groups of muscles become atrophied losing the power to perform their functions, an apparatus as shown, Fig. 70, suited to the case, should be worn. The muscles are excited into action, and aided by artificial substitutes made of elastic rubber or steel, placed on the instrument so as to gently exercise the affected parts. This will often recall them to a sense of their duty.

DIRECTIONS FOR MEASUREMENT:

1. Patient's name.
2. Patient's age.
3. Right or left leg. *Inches.*
4. Length from sole of foot to ankle-joint, . . "
5. Length from sole of foot to knee-joint, . . "
6. Length from sole of foot to upper third of thigh, . "
7. Circumference of calf, ... "
8. Circumference of knee, ... "
9. Circumference above knee, ... "
10. Circumference of thigh, ... "

Send laced shoes. If you wish us to furnish shoes, the following additional measurements are required:

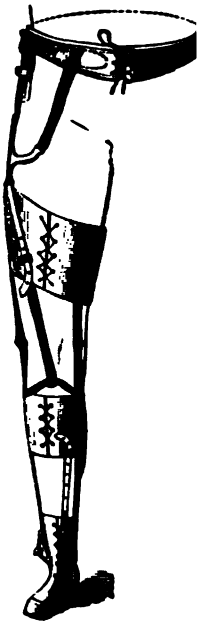
a Length of sole of foot, ... *Inches.*
b Circumference of ball of foot, . . . "
c Circumference of instep, ... "
d Circumference above ankle, ... "

If both legs are of equal length the above apparatus is sufficient; but if the affected limb is shorter than its fellow, the extension apparatus, Fig. 57, must be combined with it, this will add $8.00 to the price above stated.

PHYSICIAN'S POCKET MEDICINE CASES,
DESIGNED FOR
SQUIBB'S STANDARD PHARMACEUTICAL PREPARATIONS,
BY
ROBERT M. FULLER, M. D., New York.
See page 126, Part I.

Fig. 71. Apparatus for Hemiplegia.

Price of apparatus, for one leg, $30. to $40. Shoes extra.



The apparatus represented by Fig. 71 is for hemiplegia, affecting the limb to the hip-joint. We have often had occasion to make it, and found it to answer a good purpose, both as a support, and in aiding the restoration of the mobility of the muscles. It answers to the same description as Fig. 70, but is carried up to the pelvis. On to a broad steel pelvic band we fasten the artificial muscles for flexion or extension, as the case may require. It may also be worn with good results after treatment of hip-joint disease, when, by adding a perineal band, the weight of the body is borne by the apparatus.

SEND THE FOLLOWING MEASUREMENTS:

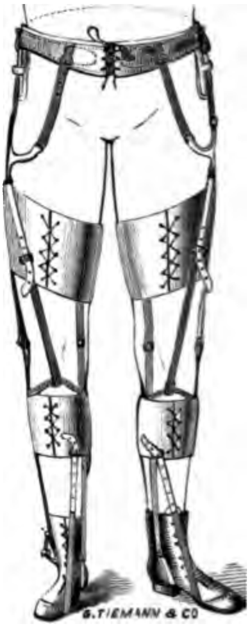
1. Patient's name and description of the case.
2. Patient's age.
3. Right or left leg. *Inches.*
4. Length from sole of foot to ankle-joint, . “
5. Length from sole of foot to knee-joint, . . “
6. Length from sole of foot to trochanter-major, “
7. Length from sole of foot to crest of ilium, . “
8. Circumference of calf, . . . “
9. Circumference of knee, ... “
10. Circumference above knee, . . . “
11. Circumference of thigh, ... “
12. Circumference of pelvis one inch below iliac crests, “

Patients will furnish their own laced shoes, or send the following additional measurements, if they wish us to furnish them:

a Length of sole of foot, . . . *Inches.*
b Circumference of ball of foot, . . “
c Circumference of instep, . . “
d Circumference above ankle, . . “

Fig. 72. Apparatus for Paraplegia.

Price of apparatus for both legs, $35. to $70. Shoes extra.



The apparatus for paraplegia answers to the same description as the one for hemiplegia, except that it is double. It is used when both the lower extremities are affected. A general description of the case is necessary to guide us in placing the artificial muscles in the right spot. The directions for measurements are the same as for the apparatus for hemiplegia, Fig. 71.

Fig. 73. Bow-leg Braces.

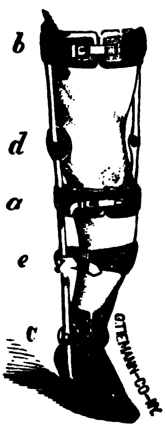
Price for a pair of braces, $25. to $30.00.
☞ Shoes are charged extra, according to quality.

The mechanical treatment of bow legs is very simple. 1. The bones in a softened condition, yielding under the weight of the body, must be assisted by extraneous help. 2. The arched bones must be restored to their normal condition. The instrument illustrated by the cut answers the purpose admirably.

The support is given by double stems of steel (secured to a shoe) carried up as high as the thigh—jointed at the ankle and knee to allow the patient perfect freedom of motion. They are kept in place by calf (*a*), and thigh-bands (*b*).

The bow is corrected by pads (*c*) and (*d*) being placed respectively against the ankle and knee on the concave side of the limb, whilst a strap (*e*) passed around on the highest point of the arc, inside of the outer stem, tightly buttoned to the steel bar on the concave side, gradually compels the leg to become parallel with it.

In slight cases, or when the bow is greatest below the calf, an instrument carried up to (*d*) is sufficient. To insure a good fit, please, in ordering the apparatus, to send the following description and measurements.



DIRECTIONS FOR MEASUREMENT:

1. Patient's name, or sex.
2. Patient's age. *Inches.*
3. Length from sole of foot to ankle joint (*c*), . . "
4. Length from sole of foot to knee-joint, inner side (*d*), . "
5. Length from sole of foot to knee-joint, convex or outer side (*d*), ... "
6. Length from sole of foot to upper third of thigh, inner side of leg (*b*), ... "
7. Length from sole of foot to highest point of the arc (*e*), "
8. Circumference of calf (*a*), ... "
9. Circumference of thigh (*b*), ... "

Patients will furnish their own laced shoes, or send the following measurements, if they wish us to furnish them:

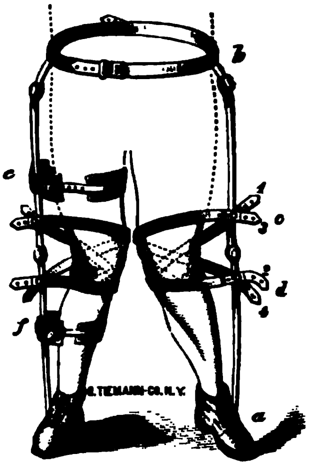
a Length of the sole of the foot, . . . *Inches.*
b Circumference of ball of foot, ... "
c Circumference of instep, ... "
d Circumference above ankle, . "

Fig. 74. Genu-valgum, or Knock-knee Brace.

Price for a pair of braces, $30. to $40.

☞ Shoes, are charged extra, according to quality.

The mechanical treatment of knock-knees requires a proper instrument of sufficient strength and yet not too heavy — to suit the condition of the patient. The one represented is the simplest and most effectual one of which we know. It consists (if the deformity be double) of two lateral stems, with joints at the ankles, knees and hips, extending from the heels of strong shoes (*a*) to a well-padded pelvic band (*b*). The pelvic band is made in two halves in order to admit of adjustment—the tightening of the posterior buckle everting the toes, that of the front buckle inverting them.



A pair of padded straps secured to each other crosswise act in the following manner:

End 1 is buttoned to the thigh stem (*c*), carried from behind, below the inner condyle, to the front, terminating in the end 2, which is buttoned to the leg stem (*d*).

The end 3 buttons to (*c*) is carried from the front to the back of the knee, passing over the inner condyle, and secured to the button (*d*). In this manner they support both the head of the tibia and femur, whilst their combined direction of force being outwards gradually corrects the deformity.*

Some surgeons prefer to have the apparatus without a joint at the knee, but is there not a risk of inducing anchylosis by too long retention of the limb in one position? Besides, the patient is liable to fall with stiff splints, and is thus in constant danger of fracturing the bones of the thigh or leg. In ordering the apparatus, send the following description and measurements for knock-knees:

1. Patient's name.
2. Patient's age. *Inches.*
3. Length from sole of foot to ankle-joint, . . "
4. Length from sole of foot to knee-joint, . . "
5. Length from sole of foot to hip-joint, . . . "
6. Length from sole of foot to iliac crests, . . "
7. Circumference of pelvis 1 inch below iliac crests, . "
8. Circumference of thigh at *c*, } A stick to be placed on the outside of the limb, and these two measures taken around both. { "
9. Circumference of leg at *d*, "
10. Right, left, both feet.

---

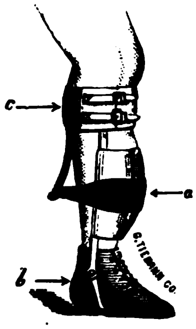
* This instrument exerts very much more power, and answer better when provided with padded metal bands at the thigh (c) and calf (*f*).

If you wish us to furnish shoes, send the following additional measurements:

11. Length of sole of foot, ... *Inches.*
12. Circumference of ball of foot, ... "
13. Circumference of instep, ... "
14. Circumference above ankle, ... "

Fig. 75. Brace for Correcting Anterior Curvature of the Tibia.

Price of a brace, for one leg, $12. to $18.
Price of a pair of braces, $24. to $36.
☞ Shoes are charged extra, according to quality.



This cut is a fair representation of the instrument. It consists of two upright steel stems, fastened below to a shoe and terminating above in the calf-band. The deformity is corrected, either by passing a leather bandage around the stems and tightly lacing it in front over the arc of the curvature (*a*), or by a strap passed over the arc of the curvature and fastened to a spur suspended from the calf-band behind (*c*).

The points of resistance being in either case the heel of the shoe (*b*) and the posterior trough of the calf-band (*c*). In ordering the apparatus, send the following particulars and measurements:

1. Patient's name (or sex).
2. Patient's age.
3. Anterior curvature of the tibia.
4. Which foot? *Inches.*
5. Length from sole to ankle-joint, ... "
6. Length from sole to calf (*c*), ... "
7. Circumference of calf, ... "

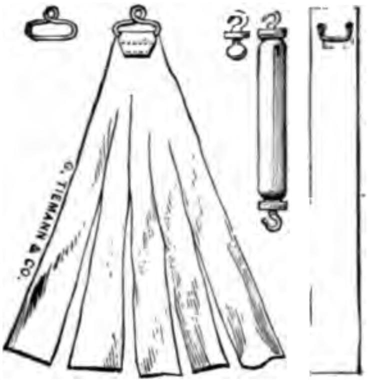
If you wish us to furnish shoes, send the following additional measurements:

a Length of sole of foot, ... *Inches*
b Circumference of ball of foot, ... "
c Circumference of instep, ... "
d Circumference above ankle, ... "

Illustrated Price List of Clinical Thermometers

Page 75, Part I.

Fig. 76. Barwell's Attachments and Artificial Muscles for Adjusting Club-feet.


G. TIEMANN & CO.

Price, Wire Eyes or Hooks, 10 cents, each.
Tin Plates, with loops, each, 20 cents.
Rubber Tubing for Muscles, per foot, 12 cents.
Moleskin Plaster, per yard, $1.50.

CLUB-FOOT CURED WITHOUT TENOTOMY.—The ordinary cause of deformity of the foot is not contraction of certain tendons, but paralysis of the muscles connected with the uncontracted ones. Hence division of tendons which retain their normal power is not the way to cure the deformity. The author's mode of treatment is to supply the place of the paralyzed muscles by means of elastic cords. By a light and simple contrivance, these cords are fastened to points as near the origin and insertion of the paralyzed muscles as possible, and the patient is encouraged to use his limb, while at the same time constitutional remedies are prescribed, and local means, such as friction, galvanism, &c., are employed. This treatment proceeds on the principle that our aim ought to be to strengthen weak parts, and not to weaken strong ones. The author has adapted his method to the treatment of knock-knees and crooked shins, and he has devised means by which spring force may be brought to bear upon these deformities in such a way as to draw the bones into a more natural position. (Mr. R. Barwell, p. 124.)

Fig. 77. Apparatus to Evert the Feet.

Price $5. to $10.00.
Price of apparatus, with Pelvic Band, $30.
Shoes, are charged extra, according to quality.

This apparatus answers well for in-door exercise, but patients cannot get up or down stairs, nor walk on uneven ground without being in constant danger of falling. An apparatus carried up to a pelvic band, made in two halves, answers this purpose better. This pelvic band admits of adjustment, the tightening of the posterior buckle everts the toes, whilst that of the front buckle inverts them. All our pelvic bands on the apparatus for the lower extremities are arranged in this manner, and answer the purpose very well. (See pelvic bands described on apparatus, Fig. 74.)

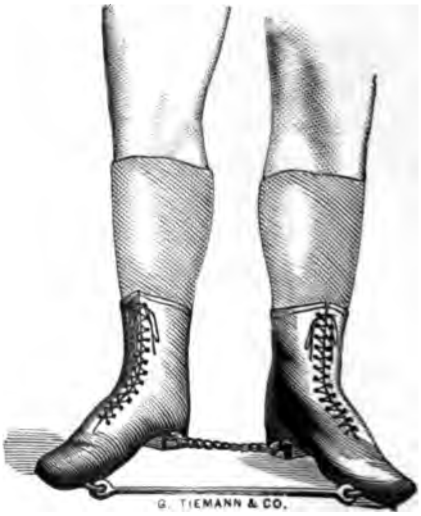
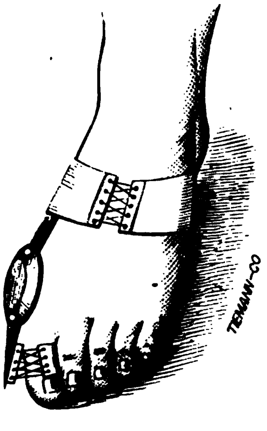

G. TIEMANN & CO.

Fig. 78. Bigg's Apparatus for Bunions.

Price for Apparatus, for one foot, $8. to $12.
Price for Apparatus, for both feet, $16. to $24.

This apparatus consists of a delicate lever of spring steel, with an oval ring in the centre, which is provided with hinges at its anterior and posterior margin. The apparatus is attached to the instep by a laced band, and the toe to the extremity of the spring by a piece of webbing. It affords the articulation freedom of motion in the natural plane, whilst the malposition of the toe is gradually rectified by constant lateral traction. It can be worn in a shoe.

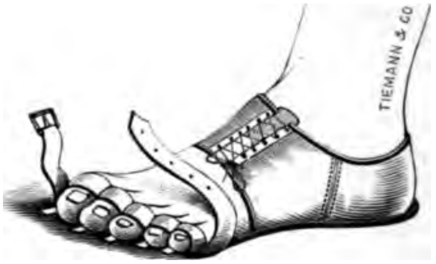


DIRECTIONS FOR MEASUREMENT.

1. Place the foot on paper and trace with pencil.
2. Circumference of ball of foot, . *Inches.*
3. Circumference of instep, . . . "

Fig. 79. Apparatus for Over-riding Toes.

Price of Apparatus, for one foot, $7. to $15.00.
Price of Apparatus, for both feet, $14 to $30.



The apparatus for over-riding, or "hammer toes," consists of a steel sole arranged with slits corresponding to the spaces between the toes. A strap of webbing is passed through these slits and over the contracted toe (or over each and all, as the case may require), and buckled or tied under the sole, tense enough to straighten the toe. This apparatus is kept in place by a thin silk, linen or cotton covering, laced to the instep, and may be worn in an ordinary shoe.

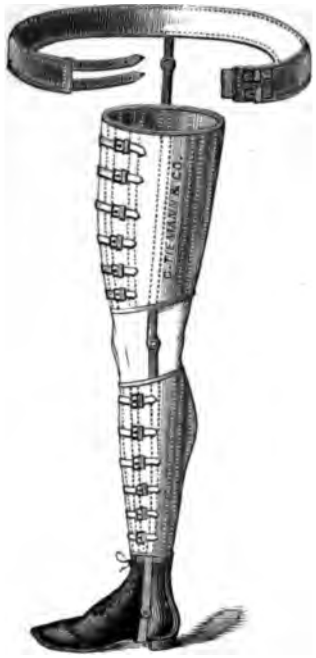
DIRECTIONS FOR MEASUREMENTS.

1. Place the foot on paper and trace with pencil. *Inches.*
2. Circumference of ball of foot, ... "
3. Circumference of instep, ... "

DRY CUPPING for the relief of Rheumatic Pains, Paralysis, and Atrophy of Muscles. See Figs. 176, 177. Junod's Boot and Arm.

APPLICATION OF COLD AND HEAT for the treatment of Paralytic conditions. See Fig. 182. Hamilton's Revulsor. See Electro Magnetic and Galvanic Batteries, &c. page 100, Part I. Galvanic Belts and Soles, page 104, Part I.

Fig. 80. Apparatus for False Joints in the Leg or Thigh resulting from Resection or Fracture of the Bones (Ununited).



Price of Apparatus, for children, $25. to $35.
Price of Apparatus, for adults, $40. to $75.
☞ Shoes, are charged extra, according to quality.

This apparatus consists of two lateral steel stems, the inner one of these is carried to the upper third of the thigh, the outer one terminates in a pelvic band situated an inch below the iliac crests. Calf and thigh-bands, made either of sole-leather nicely moulded to the limb, or of sail-cloth, stayed by a number of steel springs, corset-like, and well-padded, connect the steel stems, which latter are provided with joints for the ankle, knee and hip. The strength of these stems must be in proportion to the patient's weight. The leather or sail-cloth casing is required only at the place of the false joint, the other band may be softer and smaller, as convenient. If desired, the knee-joint may be made to remain stiff when walking, and flexible when sitting down, by merely touching a spring with the hand outside the clothing.

DIRECTIONS FOR MEASUREMENTS.

1. Patient's name.
2. Patient's weight.
3. Right or left leg.
4. Position of false joint. *Inches.*
5. Length from sole to ankle, ... "
6. Length from sole to knee, ... "
7. Length from sole to crutch, (perineum), . . "
8. Length from sole to trochanter major, . . . "
9. Length from sole to iliac crest, ... "
10. Circumference at

1st buckle, .	*Inches.*	7th buckle, . .	*Inches.*
2d " . .	"	8th " .	"
3d " . .	"	9th "	"
4th " . .	"	10th " . .	"
5th " . .	"	11th " . . .	"
6th " . .	"	12th "	"

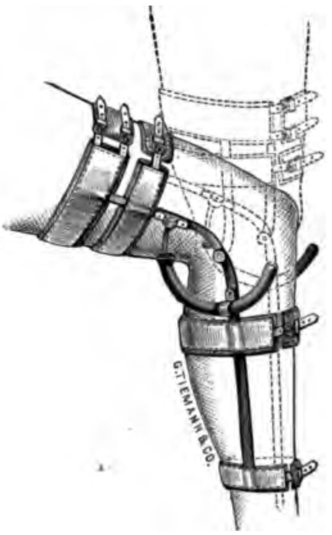
11. Circumference of pelvis one inch below iliac crests, . "

If we are to furnish shoes, the following additional measurements are required:

a Length of the sole of foot, ... *Inches.*
b Circumference of the ball of foot, . . . "
c Circumference of instep, ... "
d Circumference of ankle, ... "

Fig. 80b. Hooper's Knee Extension Apparatus.

Price, $35.00.



It consists of a band encircling the thigh, of another for the calf, and of one above the ankle. These are fastened to two lateral shafts provided with joints at the knee. Two semicircular brass tubes, fastened to the lower calf shafts, contain each a spiral spring, acting on bows fastened to the thigh shaft, thus exerting constant elastic extension, which is sure to overcome muscular contraction soon.

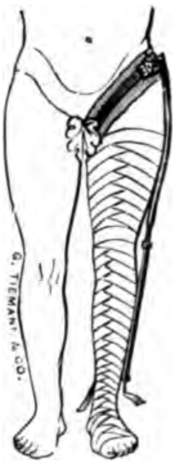
DIRECTIONS FOR MEASUREMENT.

Circumference above knee, . *Inches.*
" at knee, . . "
" below knee, . "
" above ankle, . . "
Length from above ankle to knee, "
" knee to upper third of thigh, "

Fig. 81. Davis' Hip-Joint Splint.

Price of Splint, $15.00.

Price of Adhesive Moleskin Plaster, per yard, $1.50.



Davis' Portable Extension Apparatus allows mobility of the joint, while it diminishes friction of its surfaces. It is used in attempting to re-establish the natural functions of the part. The apparatus is to be worn when the acute stage is passed. Extension is made from the foot, counter-extension from a two-fold perineal band, the outer one of which is inelastic, the other composed of elastic webbing, so as to allow extension to a certain point only, when the joint can be fixed. It is applied to the limb by means of adhesive plaster strips, secured with roller bandages. It is applicable to either right or left leg.

DIRECTIONS FOR MEASUREMENT.

Length from the ankle to iliac crest, . *Inches.*

This is the only measure needed, as the splint admits of considerable adjustment of length.

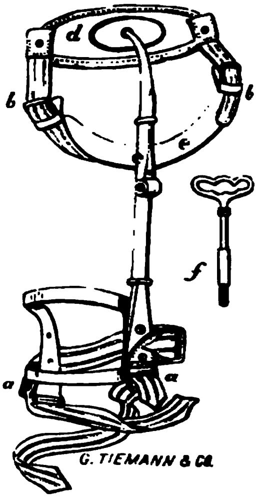
Fig. 82. Dr. L. A. Sayre's Apparatus for the Treatment of Hip-joint Disease.

Price of splint, small size, $15.00.
Price of splint, medium size, $16.00.
Price of splint, large size. $18.00.

This apparatus consists of two portions, the upper, made of corrugated steel, attached by means of a universal joint to a pad of proper size (*d*) fitting on the dorsum below the crest of the ilium, and holding in place a perineal band (*e*) adjustable by strong webbing and buckles (*bb*).

The lower portion (*f*), is simply a ratched bar, sliding within the first. Its inferior extremity is easily adjusted by means of a single screw to either side of two semi-circular bands (*aa*), embracing the thigh just above the knee, making the apparatus answer for both limbs. The cut representing the same arranged for the left leg.

Extension is made by working the splint with key *f*.

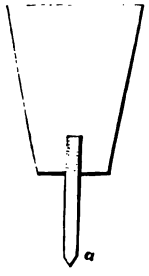


DIRECTIONS FOR MEASUREMENT.

1. Length from trochanter major to knee-joint, *Inches.*
2. Circumference of thigh above knee, - - "

The Application of the Splint,

Is as simple as its construction. Take strong adhesive plaster, spread on twilled muslin, cut two fan-shaped pieces (Fig. 83), one large enough to reach from the perineum to within two or three inches of the condyle of the femur, on the inner side of the thigh, the other from the trochanter major to a point directly opposite the end of the inner plaster. Sew on the narrow end of each (Fig. 83), *a*, one of the webbings, represented in Fig. 82, *aa* (not on the sticky side). Apply to their respective places, and after pressing them with the warm hand, to obtain a firm adhesion, secure them further by a well-adjusted roller. The instrument contracted, is now laid over the thigh, the webbing (Fig. 83), *a*, firmly fastened over the rollers to the buckles (Fig. 82), *aa*, and the remaining one around the thigh. The perineal band is now adjusted, rather firm, and the instrument extended with the key, just enough to make the patient comfortable, and then locked by pulling the slide down over the spring (Fig. 82), *c*.



In order to prevent the limb from swelling below the bandage, Dr. Sayre recommends the use of an elastic stocking or knee-cap.

Price of Elastic Hose, see fig. 101.
Price of Moleskin Adhesive Plaster, per yard, $ 1.50.

Figs. 84a. 84b. Hamilton's Wire Gauze Splint for Hip-Joint.

Price, $15.00.

FIG. 84a.

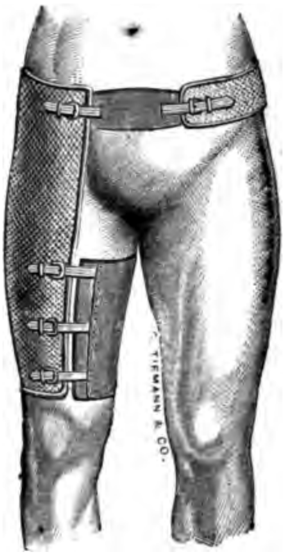
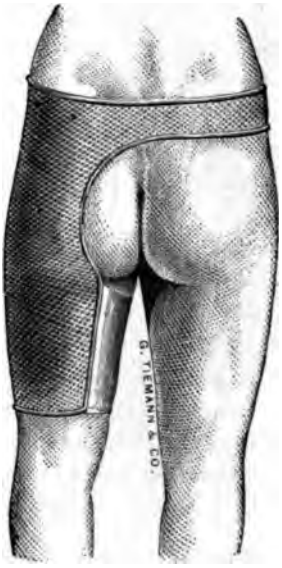

G. TIEMANN & CO.

FIG. 84b.


G. TIEMANN & CO.

The above splint consists of an iron wire frame, moulded to the outside or back of the pelvis and thigh, covered with wire gauze. It is kept in place by a pelvic and a broad thigh-band, and secured with buckles. Dr. Hamilton advises its use whenever it is desirable to secure immobility of the joint, together with exercise in the open air.

DIRECTIONS FOR MEASUREMENT:

1. Name of patient.
2. Age of patient.
3. Weight of patient (estimated).
4. Right or left side. *Inches.*
5. Crest of ilium to the condyles of the femur, . . "
6. Circumference of the pelvis at iliac crest, . . "
7. Circumference at the nates, ... "
8. Circumference of the upper part of the thigh, . "
9. Circumference of the thigh above the knee, . . "

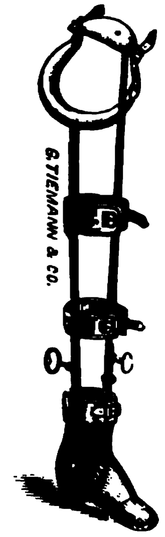
☞ Andrew's Morbus Coxarius Splint, Fig. 191.

Fig. 85. Bauer's Hip-Joint Apparatus.

Price $25.00.

☞ **Shoes are charged extra, according to quality.**

This apparatus affords extension in a vertical line, and complete immobility of the joint. By being fastened to the shoe it utilizes the foot for extension, the tuber ischii for counter-extension and the key rack and pinion for a moving power. No adhesive strips are used with this apparatus.



DIRECTIONS FOR MEASUREMENT:

1. Patient's name.
2. Patient's age.
3. Patient's weight (estimated).
4. Right or left leg. *Inches.*
5. Length from the sole to the tuber ischii (sound leg) "
6. Length from the sole to the tuber ischii (diseased leg) "
7. Circumference of calf, ... "
8. Circumference of thigh, ... "

Send a shoe or the following additional measures if you wish us to furnish one:

a Length of foot, ... *Inches*
b Circumference of ball of foot, ... "
c Circumference of instep, ... "
d Circumference above ankle, ... "

Fig. 86. Bauer's Wire Breeches.

Price of Wire Breeches, small size, $15.00.
Price of Wire Breeches, medium size, $18.00.
Price of Wire Breeches, large size, $25.00.

Bauer's Wire Breeches are used after excision of the head and neck of the femur in necrosis, after the removal of shattered bone, or balls in gun-shot fracture, and in the treatment of chronic inflammation of the hip-joint when perfect rest and position of the affected parts are desired. It consists of a heavy wire frame covered with wire gauze to fit the posterior half of the body from the axillary cavity to the sole of the foot.

Proper sized openings may be cut through the gauze to admit of dressing any wounds, without being obliged to remove the splints. There is also an opening for the anus, so that the patient can pass his fæces by having the lower end of the apparatus raised and a bed-pan placed under it. The apparatus may be lined with cotton batting, and the patient securely fastened with adhesive plaster strips and roller-bandages. After the feet are secured to the foot-board, extension can be made by turning the thumb-screws, counter-extension being from the healthy extremity.

DIRECTIONS FOR MEASUREMENT.

1. Patient's name.
2. Patient's age.
3. Patient's weight. *Inches.*
4. Length from sole of foot to axilla, . "
5. Length from sole of foot to perineum, "
6. Circumference of calf, . . . "
7. Circumference of knee, . . "
8. Circumference of thigh, . . . "
9. Circumference at the nates, . "
10. Circumference of pelvis at iliac crests, . "
11. Circumference of waist, . . "
12. Circumference of chest under axillæ, . "

Fig. 86.

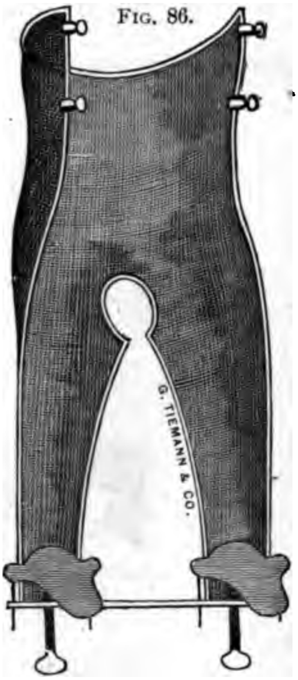


Fig. 87. Taylor's Hip-Joint Splint.

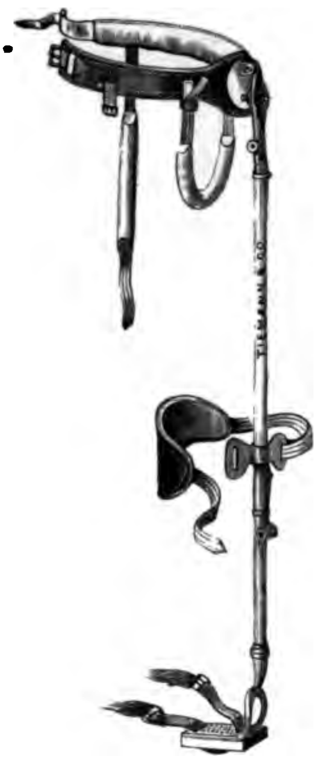
Price of Taylor's Hip-Joint Splint, small size, $25. to $30.
Price of Taylor's Hip-Joint Splint, large size, $35. to $40.

This splint extends from the sole of the foot to the crest of the ilium, at which point it is connected to a pelvic band by means of a joint allowing flexion and extension, abduction and adduction: which latter motion is regulated by means of a thumb-screw. Extension is made by means of a rack and pinion rod, sliding within a steel tube, moved by a key, and kept in position by a spring catching the teeth of the rack. Counter-extension is made by means of two perineal pads fastened to the pelvic band with straps and buckles. At the knee-joint is a movable cross-piece for attaching a leather cap to steady and support the knee. At the bottom of the instrument is a foot-piece with a leather sole attached, to prevent jar in walking. A leather strap, passing under the foot, through apertures in the foot-piece, turns up an end on each side of the ankle, and fastens to buckles in adhesive strips, which prepare as follows:

Cut two pieces of plaster, to reach from the waist to the foot, from three to five inches wide at the top, and from 1 to 1½ inches at the lower end, and divide tops into five tails, cut a piece about five inches long, from each centre tail, and add it to the lower ends of the plaster to strengthen them, then add two or more similar pieces at the same place and attach a buckle. Apply the plasters against the lateral aspects of the leg, beginning, about two inches above the internal and external maleolii with the ends having the buckles attached. The centre tails reaching the entire length of the leg and thigh, to the perineum and trochanter respectively;

then wind the lower ends spirally around the leg up to the pelvis and afterwards the other two tails, which first cut down to just above the knee.

FIG. 87.



This involves the limb in a complete network of adhesive strips, the leg having about one-fourth, the thigh three-fourths thereof, which is found to be the proportion to protect the leg and knee equally from compression or strain.

A few turns of roller bandage are then made around the ankle, just under the lower ends of the straps, to protect the flesh under the buckles, and then continued over the strips on the whole limb.

The patient should be laid on his back, and great care ought to be taken that the pelvis is not inclined forward by contractions of the flexor muscles; should this be the case: elevate the leg until the lumbar vertebræ come near the couch and the spinal column assumes its normal shape. The instrument is then applied. The pelvic-band ought to be loose enough to allow the pelvis to move freely in it. The anterior superior spine of the ilium ought to be above the pelvic-band.

In applying the ankle straps leave a little space between the foot and the footpiece so that in standing or walking the weight of the patient does not rest on the leg, but on the instrument.

The perineal straps must be so adjusted that the patient sets firmly and comfortably upon them.

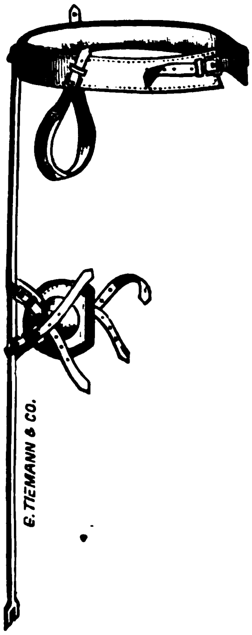
The foot is dressed with a shoe in the ordinary manner. When all is adjusted the patient still lying on his back, extension is made by turning the key. As this arrangement, for supporting the patient on the instrument, increases the length of the affected limb, the sound leg should have the same amount, or a little more, added to its length by increasing the thickness of the sole of the shoe.

1. Name of patient.
2. Age of patient.
3. Weight of patient.
4. Right or left leg.
5. Length from sole to crest of ilium.
6. Circumference of pelvis at iliac crests.

Price of Adhesive Plaster	per yard. $ .75
Price of Moleskin Adhesive Plaster (spread on twilled goods)	" " $1.50
Price of Roller Bandage	per pound $1.50

Fig. 88. Washburn's Hip-joint Splint.

Price, $ 7.00.


G. TIEMANN & CO.

This is a simple, straight bar of steel, jointed to a pelvic band. It is intended for poor patients, and has neither racks, pinions, nor screws. Extension is made, after fastening the lower end with adhesive strips, simply by the degree of tensity to which the perineal straps are adjusted. A knee-cap assists in keeping the splint in place.

Directions for Measurements:

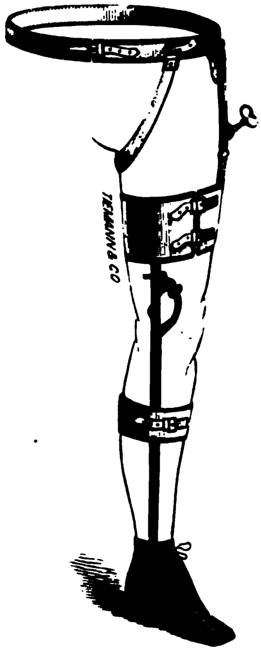
1. Length from ankle to dorsum ilii, . *Inches.*
2. Circumference of pelvis, . . . "

Fig. 89.

J. C. Hutchison's Hip-joint Apparatus.

Price of Apparatus, small size,	$ 25.
Price of Apparatus, large size,	$ 35.
Fine finished Apparatus, small size,	$ 30.
Fine finished Apparatus, large size,	$ 40.

Shoes are charged extra, according to quality.



This apparatus is portable, and, being fastened to a shoe, needs no adhesive strips. Two rods of steel extend from the foot to the upper third of the thigh and are secured to the leg with calf and thigh-bands. The outside rod, longer than the other one, is ratched, and slides in a steel tube which is hinged by a ball and socket joint to a pelvic band. To this pelvic band is attached a perineal strap for counter-extension. Extension is made by working the splint with a key. The splint is provided with joints for the ankle and knee, the later one is adjustable to any degree of flexion and extension, and may be fixed at any point or its motion limited, by an arrangment of a screw and two nuts.

Directions for Measurements:

1. Name of patient.
2. Age of patient.
3. Weight of patient.

4. Right or left leg. *Inches.*
5. Length from sole of foot to ankle-joint, . . "
6. Length from sole of foot to knee-joint, . . "
7. Length from sole of foot to trochanter major, . . "
8. Length from sole of foot to crest of ilium, . . "
9. Circumference of calf, ... "
10. Circumference of thigh, ... "
11. Circumference of pelvis, ... "

If you wish us to furnish shoes, send the following additional **measurements:**

a Length of foot, ... *Inches.*
b Circumference of ball of foot, ... "
c Circumference of instep, ... "
d Circumference of ankle, ... "

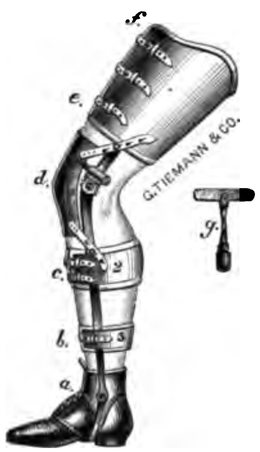
Fig. 90. Long Anchylosis Apparatus.

Price, $ 35.00. to $ 40.00.

☞ Shoes, are charged extra, according to quality.

For overcoming muscular contractions of the knee-joint, and for favoring the re-establishment of motion in cases of false anchylosis.

It consists of metal troughs 1, 2, 3, for the reception of the thigh and leg, united by two lateral shafts, provided with joints at the knee and ankle and attached to a shoe. A knee-cap, adjusted to buttons on the lateral shafts with strong elastic straps, exerts pressure on the patella, whilst the instrument may be flexed and extended by means of a key (*g*) and rachet-joint, opposite the knee.



It is an admirable apparatus for the gradual extension of contracted muscles and for favoring the re-establishment of motion in cases of false anchylosis, and of remaining stiffness and dryness after treatment of joint disease. By persistent and daily passive exercise a flexible and useful joint may be restored without confining the patient to bed or room. The mechanism is powerful, and may be moved swiftly, adapting it to the forcible breaking up of adhesions as well, should the surgeon prefer this to gradual extension. If desired the instrument can be made to detach from the shoe, for the greater comfort of patients who are obliged to wear the apparatus continually, but wishing to remove the shoe at night. It is also the best guard against malposition, for should it be deemed impossible to effect a cure the limb may be placed in a situation (to anchylose) most conducive to its future usefulness.

DIRECTIONS FOR MEASUREMENTS:

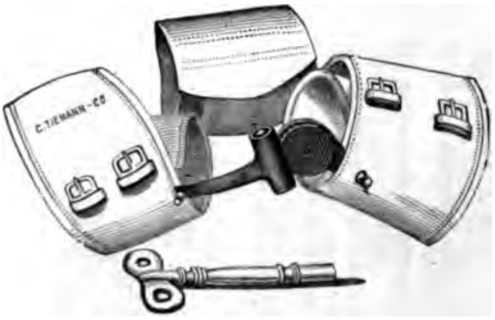
1. Patient's name. .
2. Anchylosis apparatus, Fig. 90.
3. Right or left leg?
4. Patient's age. . *Inches.*
5. Length from sole of foot to ankle-joint (*a*), . . "
6. Length from sole of foot to knee-joint (*d*), . . "
7. Length from sole of foot to upper third of thigh (*f*), "
8. Circumference above ankle (*b*), ... "
9. Circumference of calf (*c*), ... "
10. Circumference of knee (*d*), ... "
11. Circumference above knee (*e*), ... "
12. Circumference of thigh (*f*), ... "

If you wish us to furnish shoes, send the following additional measurements:

a Length of sole of foot, ... *Inches.*
b Circumference of ball of foot, ... "
c Circumference of instep, ... "
d Circumference above ankle, ... "

Fig. 91. Short Anchylosis Apparatus for Knee-Joint.

Price, $25. to 30.



This is the same in principal as Fig. 90, but consists of a thigh and a calf band only. It does not keep in place as well as the one described above, but answers well in slight cases.

DIRECTIONS FOR MEASUREMENT:

1. Apparatus Fig. 91. INCHES.
2. Circumference of calf, "
3. Circumference of knee, "
4. Circumference above knee, "
5. Circumference of thigh, "
6. Right or left leg?

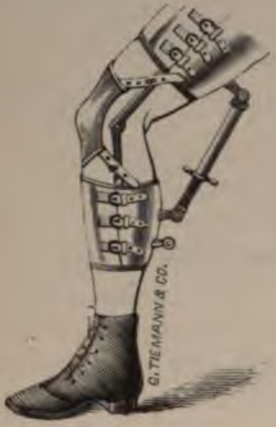
Andrew's Brace for Inflamed Knee-joint, Fig. 187.

Andrew's Brace for Inflamed Knee-joint when in the bent position, Fig. 188.

Andrew's Brace for Straightening Bent Knees, Fig. 190.

Fig. 92. Anchylosis Apparatus for the Knee-joint.

With Screw. Price, $18 to $24.

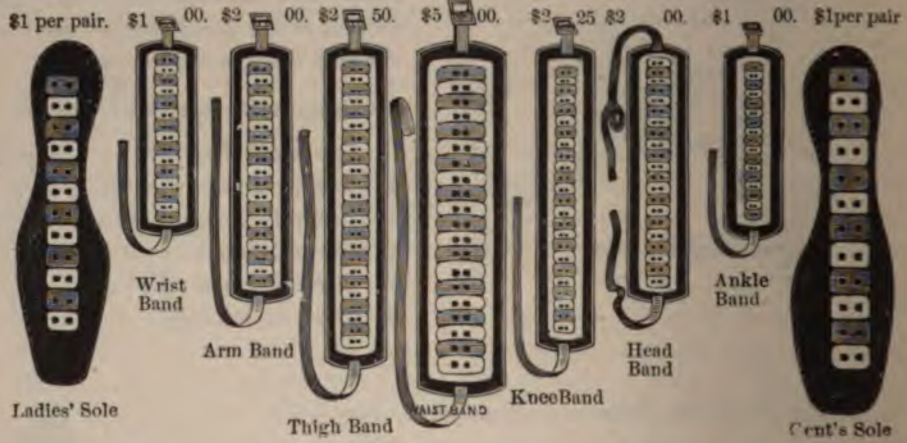


This is a simpler and lower-priced apparatus, than those represented in fig. 90 and 91; but not so elegant in form, nor so comfortable to wear. The cut explains itself.

Directions for Measurement:

1. Patient's name.
2. Anchylosis apparatus Fig. 92.
3. Right or left leg?
4. Patient's age INCHES.
5. Length from above ankle to knee-joint, . "
6. From knee-joint to upper third of thigh, "
7. Circumference above ankle, . . "
8. Circumference of the calf, . . "
9. Circumference of the knee, . . "
10. Circumference above the knee, . "
11. Circumference of the thigh, . . "

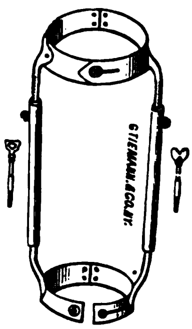
THE VOLTAIC ARMADILLO.



An Electro-Magnetic remedy for nervous diseases. No shock or unpleasant sensation experienced, but a constant electric current, giving to the nerves a gentle stimulus, reviving circulation, removing congestion, and with it pain and soreness. Used for neuralgia, rheumatism, sciatica, lumbago, weak-back, cold-feet, chilblains, nervousness, general-debility, &c., &c., &c. The Armadillo is flexible and easily applied and can be worn with safety at any time.

Fig. 93. Sayre's Knee-Joint Apparatus.

Price, $ 20.00.



It consists of two bands or collars of sheet-steel, about an inch wide, embracing the limb—the one above the ankle, the other at the upper third of the thigh admitting of adjustment by means of a hinge and slide, and may be locked, at any given point, by turning the nut with the key fitted for this purpose. They are connected on either side by an extension rod, of the rack and pinion (or screw) construction.

To apply this instrument, adhesive plaster is required, spread on twilled goods, and cut in strips one inch wide and long enough to reach from just below the knee to near the ankle, and from the knee upwards several inches, as here represented. (Fig. 94.)

These plasters are secured to within an inch of their extremities by a snugly adjusted roller, seen in the cut (Fig. 95.) The instrument is then placed on the limb, the collars fastened sufficiently to be comfortable, and the loose ends of the adhesive plasters turned over and secured by a roller.

FIG. 94.

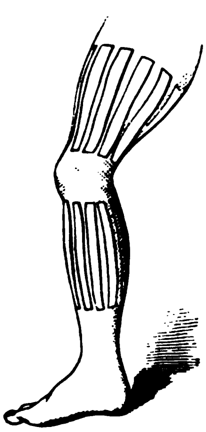


FIG. 95.

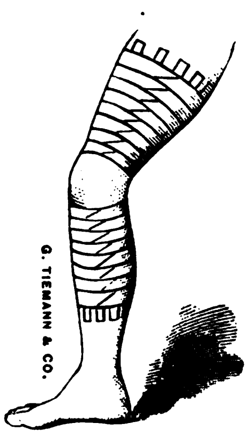


FIG. 96.

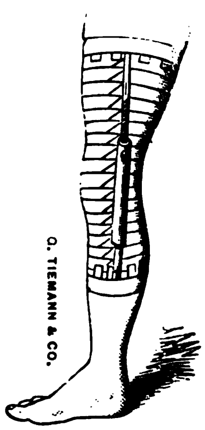
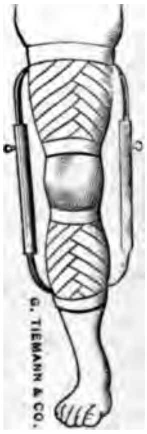


FIG. 97.



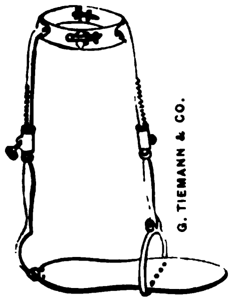
The connecting rods are extended simultaneously, by the keys of the rack and pinion construction, or by turning the screws if made the latter way, the articulating surfaces of the tibia and femur separated from each other, and the limb brought nearly straight as in Figs. 96, 97, until pressure can be made on the foot without pain. A roller is applied over the foot and leg up to the instrument, to prevent œdema. A large coarse sponge is placed in the popliteal space, and other pieces of sponge completely surround the knee-joint; these are secured by a tight roller and then saturated with cold water. The cold water not only reduces the inflammation of the joint, but, by increasing the pressure of the sponge, promotes the absorption of the deposits that generally occur around and in a joint in this condition of chronic inflammation.

The necessary measurements in ordering the above are: *Inches.*

1. Circumference of thigh, ... "
2. Circumference of leg above ankle, . . . "
3. Circumference of knee, ... "
4. Length from above ankle to upper third of thigh, . "

Fig. 98. Sayre's Ankle-Joint Apparatus.

Price, $ 22.00.



This instrument consists of a firm steel plate, made to fit the sole of the foot; at the heel is a hinge-joint, and attached to it a rod, slightly curved at the bottom, and extending up the back of the leg to near the knee. Over the instep is an arch, like the top of a stirrup, with a hinge-joint at its summit from which springs another rod, which runs in front of the leg, of equal length with the one behind. These rods are made with a male and female screw, or ratchet and cog for extension, and connected at the top by a firm band or collar of sheet-steel, admitting of adjustment by a slide, and may be locked by turning the nut with the key. The instrument is applied with firm adhesive plaster, cut in strips about one inch wide, and long enough to reach from the ankle to near the tubercle of the tibia, and placed all around the limb, Fig. 99; the plaster is secured in its position, to within an inch of its upper extremity, by a well-adjusted roller.

The instrument is fixed, the foot firmly secured by a number of strips of adhesive plaster, and a roller carefully applied over this plaster to prevent its slipping, the ends of the plaster at the top of the instrument are turned over the collar, (which has been previously locked, just tight enough to be comfortable), and secured by a turn or two of the bandage as represented above. Fig. 100.

FIG. 99.

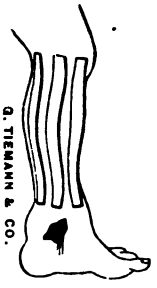
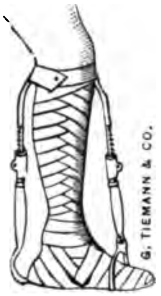

G. TIEMANN & CO.

FIG. 100.

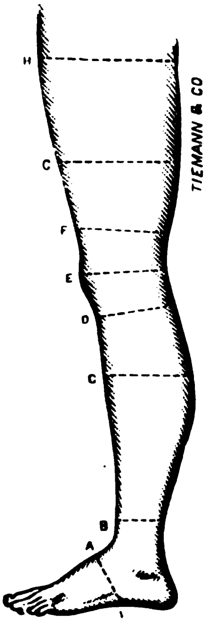

G. TIEMANN & CO.

DIRECTIONS FOR MEASUREMENT:

1. Length of sole of foot, . . . *Inches.*
2. Height from sole to two inches below knee, . "
3. Circumference of calf, . . . "
4. Circumference of instep, . . . "

Andrew's Apparatus for Inflamed Ankle Joint, see Fig. 186.

Fig. 101. Silk and Cotton Elastic Hose.



DIRECTIONS FOR MEASUREMENT:

Indicate the measure around the limb in inches opposite the dotted lines on the cut. For Stocking to cover the entire limb, measure at A B C E G H. For Stocking to reach G, measure at A B C E G. For Stocking to reach D, measure A B C D. For Knee-cap, measure at D E F. For Anklet, measure at A B.

We keep constantly in store a large assortment of best qualities of Silk and Cotton Elastic Hose, for the Treatment of Varicose Veins, Sprains, Weak Joints, &c.

Elastic Abdominal Belts, Stockings, Wristlets and Armlets, made to order.

Silk Elastic Leg and Thigh Hose to H, best, each,	$11.00
Silk Elastic Knee Hose to G, best, each,	8.00
Silk Elastic three-quarter Hose to D, best, each,	4.50
Fine Silk Elastic Knee Hose to G, each,	6.00
Fine Silk Elastic three-quarters Hose to D, each,	3.50
Cotton Elastic Leg and Thigh Hose to H, each,	5.50
Cotton Elastic Knee Hose to G, each,	3.50
Cotton Elastic three-quarters Hose to D, each,	2.00
Knee-cap Best Silk Elastic, each,	3.50
Knee-cap Fine Silk Elastic, each,	3.00
Knee-cap Cotton Elastic, each,	1.75
Anklets, each,	1.75 to 3.00

Wristlets and Armlets made to order.

Silk Elastic Abdominal Belt,	$12.00
Do. Do. Do. with Stays,	14.00
Cotton Elastic Abdominal Belt,	8.00

Abdominal Supporters of various patterns, see page 17.

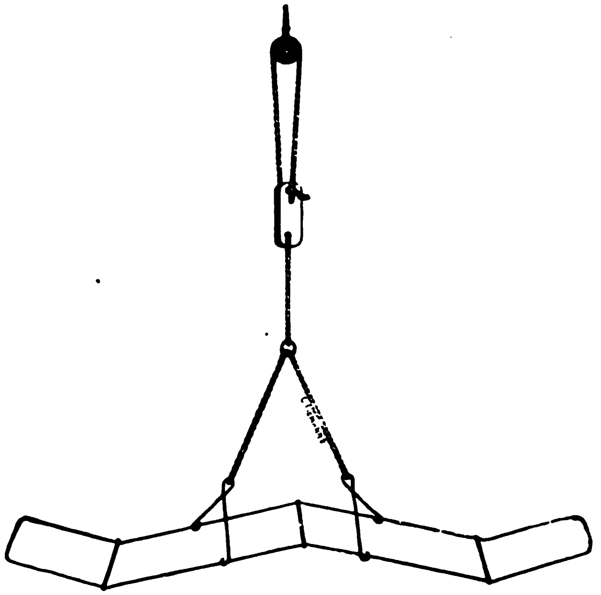
☞ The order for an Abdominal Supporter should be accompanied with the measure around the pelvis.

A lady will wait on lady customers, at the branch store, 107 East 28th Street.

FRACTURE APPARATUS.

FOR FRACTURE OF THE FEMUR.

Fig. 102. Nathan R. Smith's Anterior Splint and Suspending Apparatus for Fractures of the Leg and Thigh.



This splint is simply a frame composed of stout wire which, being suspended, allows the limb, fastened to it by rollers, to be suspended in turn. The rollers passing around both limb and splint, from the foot to the groin. The splint should extend from above the anterior superior spinous process of the ilium to a point beyond the toes. The lateral bars of the splint are separated about three inches. One of the spring double hooks fastened to the short cord for suspension ought to be nearly over the seat of fracture, the other a little above the middle of the leg.

ROHLAND'S STYPTIC COTTON.

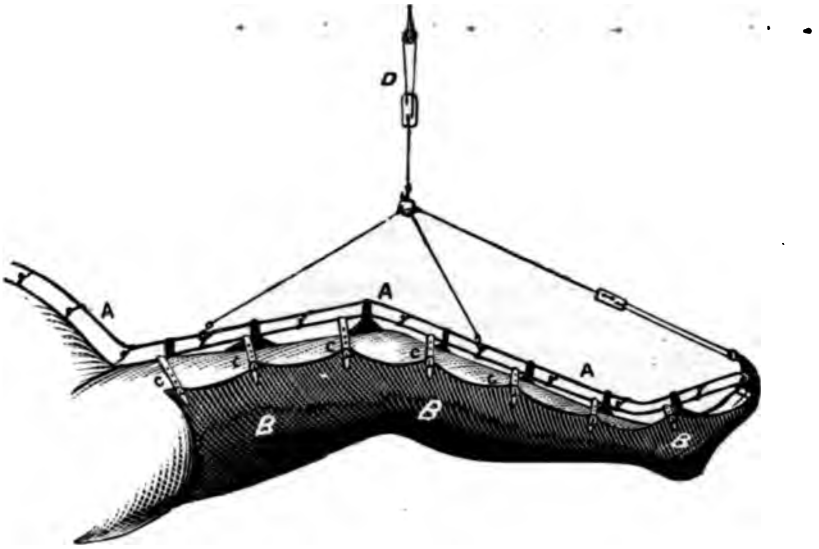
Price, per box, 35 cents.

Promptly arrests bleeding, either active or passive hemorrhages. Apply a thin layer of this cotton with gentle-pressure to the surface of the bleeding wound. If desired, it can be easily removed a few minutes after application, although the healing process will be accelerated by leaving it on. It should be kept dry.

Fig. 103. Nathan R. Smith's Anterior Splint and Byrd's Wire-Gauze Supporter.

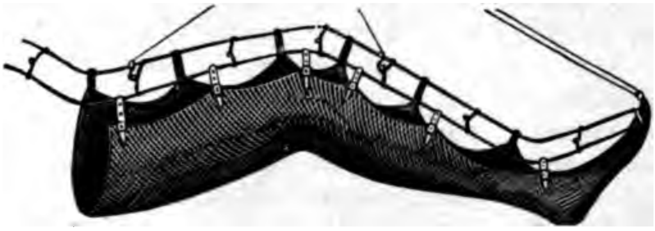
Price, $ 5.00.

FIG. 103a.



B B B represents the wire-gauze applied. Dr. Smith's anterior splint is clearly seen above at A A A. The cords and pulleys are sufficiently well defined to be readily recognized at C.

FIG. 103b.



Extract from a paper read before the Medico-Chirurgical Society of Maryland at its Annual Meeting in Baltimore, April 2d, 1872.

BY HARVEY L. BYRD, M. D.

"After taking proper dimensions of the thigh, popliteal region, leg and heel, the gauze is cut so as to adapt it to the posterior and lateral surface of the limb, and then bound around with stout cloth (thin, fine leather has been found from experience to answer a better purpose), with buckles and straps attached at suitable intervals. The limb is then made nude by the removal of the bandage that sustains the splint, and the wire gauze, as above prepared, placed in position under it. When this is accomplished, the "anterior splint," receiving proper shape, is placed over the front of the extremity, the wire-gauze secured by the buckles and straps to its longitudinal bars, and the hooks for the suspensory apparatus above having been passed into the rings or eyelets of the transverse bars of the 'splints,' the limb is swung from the bed. The greatest comfort is immediately experienced by the patient, and after adjusting the lengths of the straps so as to secure evenness and accuracy of adaptation of the wire-gauze to the entire posterior and lateral surface of the limb, the patient is left for the day.

"The whole manipulation, from the time the wire-gauze is ready for application until the procedure is accomplished, does not occupy as much time as has been consumed in writing this account of it. If the foregoing details are sufficiently clear of comprehension, it will be observed that the important objects of extension and counter-extension are as fully accomplished as by any other means, while the great relief from all anterior compression of muscles and the free exposure of the surface of the limb to the atmosphere, not only anteriorly, but latterly and posteriorly also, is sufficient to impart the greatest comfort. But the scientific surgeon will readily perceive other, and if possible greater advantages, which may be obtained from wire-gauze in the management of fractures and wounds of the lower extremities; or perhaps we should rather say great additional advantages, for it is difficult to conceive of any much greater advantage than free ventilation in such cases. The chief of these alluded to, for example, as in compound and comminuted fractures, sabre and bullet wounds, or in other wounds involving the skin and subjacent structures, and requiring frequent ablution or dressing, without disturbing the general position or condition of the limb, will be sought for in vain outside of the wire-gauze.

"A wound may be clearly seen and freely syringed or sponged, and receive other local treatment through the wire-gauze, even when situated on the posterior or lateral aspect of the limb, without disturbing its position in the slightest uncomfortable degree. Again, where it is desirable to remove, at any point, undue or uncomfortable pressure, nothing is more easily accomplished, as the leather straps and buckles attached to the margin of the wire-gauze may be slackened or tightened at such points as may be necessary to secure the desired relief. By this management, undue pressure on the muscles may be almost obviated. The foot and heel may be turned to most important account as a lever or weight in certain fractures, by increasing or lessening the support which the anterior cord and pulley, or sling attached to the distal end of the gauze is capable of effecting.

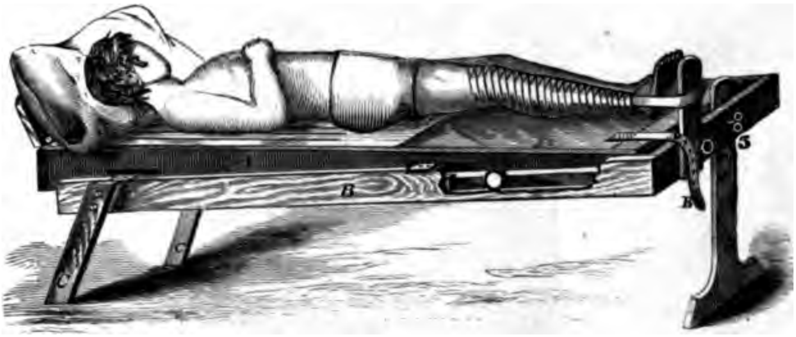
"Besides the foregoing, there are still other advantages attainable by the wire-gauze when properly attached to the anterior splint, or other support. But these will readily suggest themselves to intelligent practitioners in individual cases. The writer has become satisfied that from his own and the experience of friends, that the wire-gauze sufficiently fine, accurately cut, and properly adjusted to the limb, and anterior support, that less sagging takes place than under any other method of treating fractures, and consequently less deformity results from this than any other mode of treatment where bandages are used."

DR. VON BRUNS' COTTON LINT.

WOUND-DRESSING-COTTON. Prepared by the International Manufactory of wound dressing materials. *Schaffhausen.*

Fig. 104. Skinner's New and Improved Fracture Bed.

Price, $25.00.



By referring to the cut, the surgeon will readily comprehend the manner of treating a fracture on this bed. In the cut, A represents the bed proper, or the sliding portion thereof, which is six feet long, two and one-half feet wide, six inches high at the head and one inch at the foot. It is covered about two-thirds of its length with zinc cut into strips and laid longitudinally to the bed. A hole is made through this covering for detecation, which hole is covered with a sheet-iron cap that can be withdrawn when required. The side rails of the bed A rest on six rolls that run in grooved ways, on each side of the frame B, and the arrangement is such that, when the top of the bed is in a horizontal position, the ends of the ways at the foot of the bed are about six inches higher than the ends at the head, thereby causing a strong tendency in the bed to roll in the latter direction: extension being caused by the weight of the patient's own body.

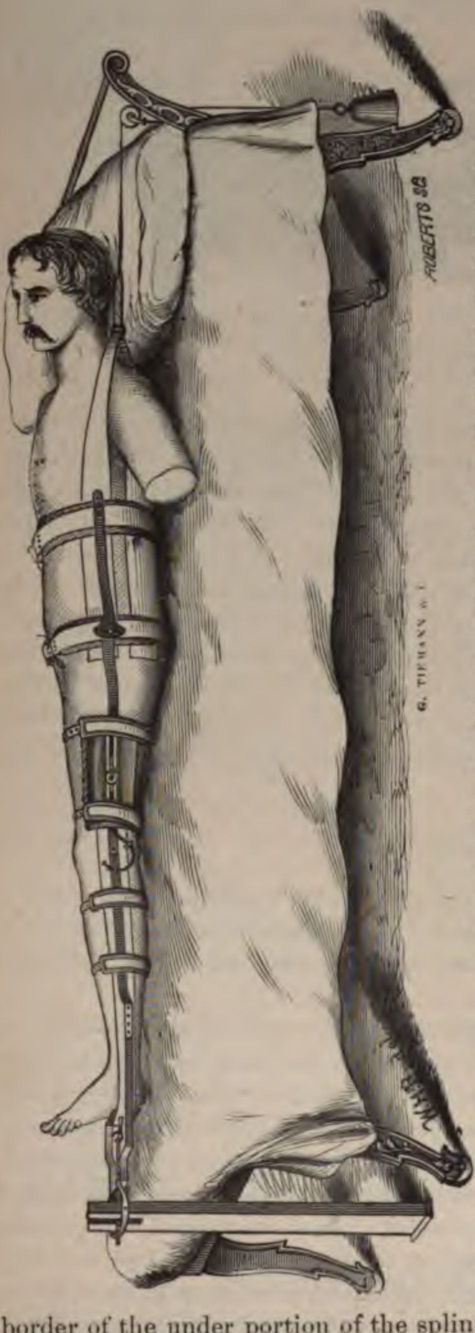
DIRECTIONS FOR USE:

See that the rolls are on the red spots in the grooves or ways; then fold blankets or quilts to the width of the bed, and so that they will reach from the centre of the hole left for defecation to the head of the bed, and from the hole to the foot of the bed. Fold the sheets in the same way.

When the hole is used for defecation, separate the blankets and sheets and introduce the bed-pan under the hole. Lay the patient on the bed, his nates over the hole. Apply adhesive straps from the point of fracture to the foot, forming a loop under the foot, which is to pass around and enclose next to the foot, the foot-board D. Apply a roller or bandage in the usual way.. By elevating the foot of the frame B, by means of the slide 2 and pin 3, the bed proper, with patient thereon, tends to slide or roll from the foot-board, to which the fractured limb is attached, thus causing any amount of extension required, according to the height the foot is raised. When the leg is extended to its proper length fasten the check-strap E, so as to prevent the bed from rolling any farther, thereby preventing any unnecessary stretching of the muscles and still maintaining the requisite tension.

Fig. 105. Hewit's Apparatus for Fracture of the Femur.

Price, $40.00.



[Extracted from *Medical Record*, N. Y., July 18th, 1868.]

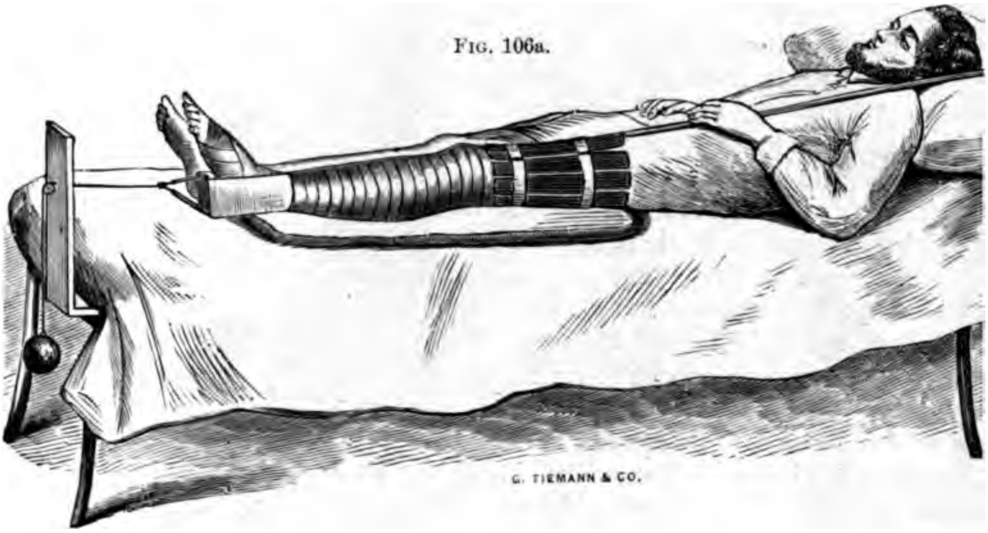
"It consists of two light flat lateral bars of steel connected by a cross-bar below the sole of the foot. The exterior bar or splint extends from its angle with the cross-bar, six or eight inches below the foot, to the side of the chest opposite the nipple. Two flat bands of steel well padded secure it to the chest and body. The inner bar reaches nearly to the perineum, but does not impinge, and the floor of the splint is of flexible metal carefully padded by a continuation of the bands which secure it to the limb and buckle in front. The two lateral bars opposite the thigh are fenestrated and nuts are inserted capable of sliding longitudinally, through which play the screws which can be used for the exact application of detached moulded metallic 'splints of coaptation.' Extension and counter-extension are obtained by broad straps of adhesive plaster extending from the groin in front and nates behind, secured by additional bands encircling the body, meeting in a ring at the top of the shoulder, and continued by an elastic cord running over a pulley at the head of the bed, and supporting a weight heavy enough to meet the requirements of the particular case.

Extension is effected and precisely regulated by plaster extending bands connected with a foot-piece to which the screw playing through a hole in the cross-bar is hooked by an elastic loop. The screws are moved by a detached key, which places them beyond the interference of the patient or his friends. The cross-bar is secured to an upright of wood at the foot of the bed, also by elastic straps, to prevent the upper border of the under portion of the splint pressing against the nates when the extending force is exerted."

Fig. 106. Buck's Apparatus for Treating Fracture of the Thigh.

Price, complete, with sand bag and wooden upwright, (*g*). $10.00.
Iron pulley fulcrum and two clamps, set of iron weights, see p. 61, $5.50, extra.

FIG. 106a.



(*b*) The extending band, two and a half inches wide, and two yards long, of Moleskin Adhesive Plaster. The middle of the band for a distance of eighteen inches should be covered on the plaster surface with a strip of muslin of corresponding width or a strip of the ordinary thin plaster stuck to it.

FIG. 106b.

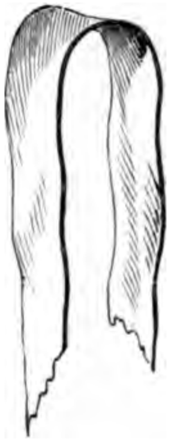


FIG. 106c.

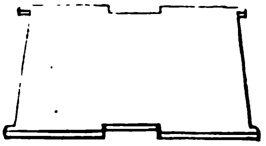
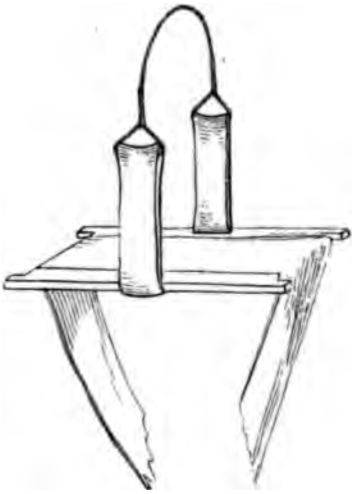


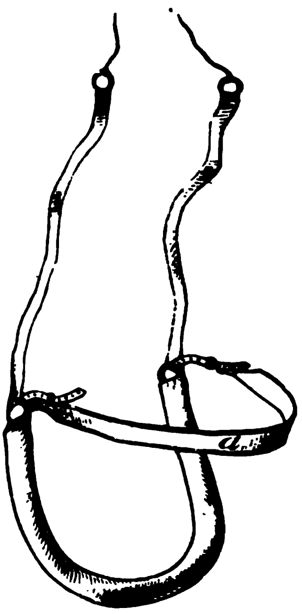
FIG. 106d.



(*c*) A thin wooden block, four inches and a half long, three inches and a quarter wide, shaped like the figure: to be interposed transversely below the sole of the foot within the loop of the extending band, to prevent pressure over the ankles, and serve for the attachment of the cord.

(*d*) An India Rubber Band, which passes round the block, and by means of which elasticity is combined with the extension.

FIG. 106e.



(*e*) The Perineal or Counter Extending Band.—The perineal portion consists of India Rubber tubing of one inch calibre, and two feet in length. It is lined with a tube of muslin stuffed with bran so as to be cylindrical in shape for one half its length in the middle, and flattened for one-fourth its length at either end. The lining tube is left longer by nearly one inch at each end than the rubber tube, and to it the rings are first fastened and then reduced within the outer tube and sewed to it. The effect of this arrangement is to limit the elasticity when the band is put upon the stretch, and prevent its being drawn out of shape by continued use. The perineal band is lengthened out at both ends by means of a piece of narrow webbing, long enough to reach above the shoulder, where a ring at both ends serves for the attachment of a cord to fasten it to the head of the bedstead.

Letter *a*. Is a belt to pass around the opposite side of the body, to maintain the bearing of the perineum band in a line with the axis of the limb and trunk. The rubber tube should be wound with Canton flannel, or other soft material, and this should be changed as often as it becomes soiled.

(*f*) Coaptation Splints, four in number, to surround the thigh. *a. a. a.* Three elastic bands with buckles to secure the splints in place.

FIG. 106f.

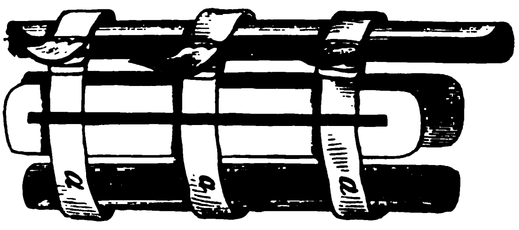
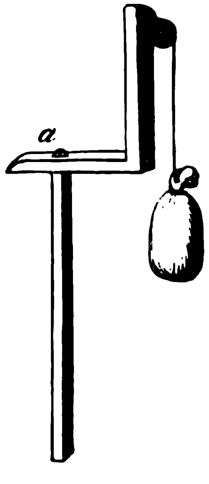


FIG. 106g.



(*g*) An upright to support the pulley. This form of upright made of wood may be adapted to any ordinary bedstead. A modification suited to iron bedsteads is represented in figure *h*. (next page.)

The sooner the limb is put up and subjected to this method of treatment after the fracture, the better. Suffering is prevented, and the sufferer made comfortable from the outset. The amount of weight to be employed must be determined by the resistance to be overcome, and the toleration of the patient. Sometimes five or six pounds only can be borne at the outset, and an increased weight subsequently.

Mode of Application.

A roller bandage commenced at the toes in the usual way is continued to the ankles where it is temporarily arrested. The band of adhesive plaster is then applied so that its middle forms a loop below the sole of the foot, and its ends extend on either side in immediate contact with the limb from the ankles upward. Over this the bandage is continued as high up as the plaster which stops at the seat of fracture. To allow the application of lotions to the thigh during the first few days of treatment, the end of the adhesive bands should stop short at the condyles of the femur and be turned down. Subsequently they may be replaced, and the bandage continued up on the thigh preparatory to the application of the coaptation splints which are to be added at this stage of the treatment.

The wooden block is next to be interposed transversely within the loop below the sole of the foot, the rubber-band applied around it, and the cord attached as in Fig. *d*. The limb being thus prepared for extension, the perineum band may now be adjusted and its ends fastened to the head of the bedstead.

The body belt is to be carried around the opposite side of the trunk and secured so that the line of counter-extension shall correspond to the line of the axis of the limb.

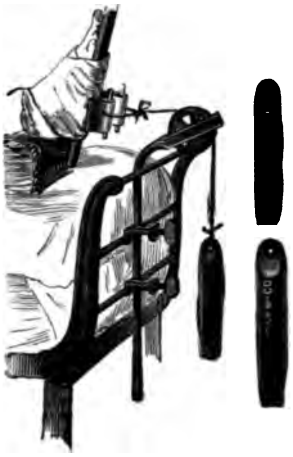
The limb should be raised upon a hair-cushion sufficiently to clear the heel from pressure.

The extending cord is to be passed over the pulley; and a weight attached to it.

Fig. 106 h. Dr. Buck's Set of Weights.

Pulley and Fulcrum, and Clamps.

FIG. 106h.



Dr. Buck's Set of Weights, consist of

One weight of	Two pounds.
Two weights of	Four pounds, each.
One weight of	Ten pounds.

Price of Buck's Set of Weights, Pulleys, Iron Fulcrum and two Clamps, $5.50.

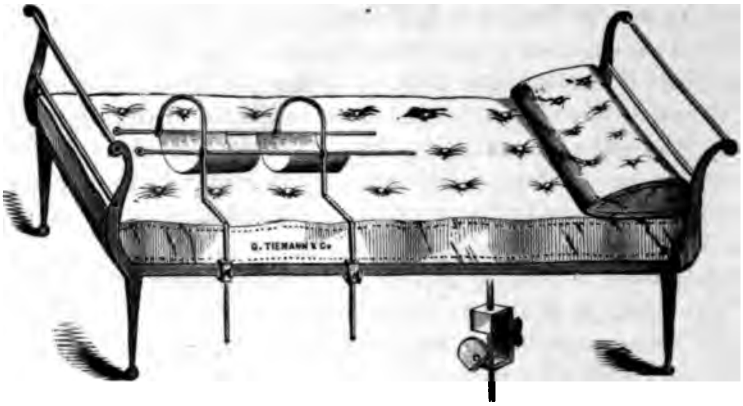
Mitchel's Adhesive Plaster, applied by moisture, per yard, $0.75.

Moleskin Adhesive Plaster, spread on twilled goods, very strong, applied by heat, per yard, $1.50.

Roller Bandage, per pound, $1.50.

Fig. 107. Apparatus for Gunshot Fractures of the Femur.

Price, $10.00 to $25.00, according to finish.



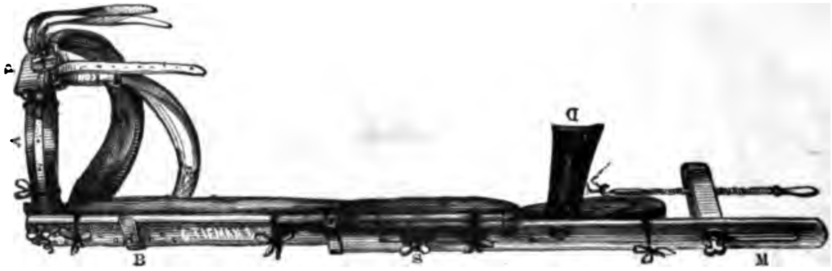
The apparatus is composed of strong iron bars, bent as in the above drawing (Fig. 107), through which are passed two horizontal sliding rods, supporting two pieces of canvas, upon which the limb may be suspended. The perpendicular bars are furnished each with a clamp and thumb-screw, by means of which the bars may be made fast to the side-rails of an iron bedstead, or, in case of necessity, to the side of a stretcher. The clamps enable the surgeon to suspend the limb at any height from the bed, and to give to the canvas bottom any degree of inclination desirable.

Fig. 108.

Lente's Apparatus for Treatment of Fracture of the Thigh.

Price, $18.00.

FIG. 108a,



"This apparatus is a modification of the splint originated by Desault more than half a century ago, and altered by various surgeons from time to time, but especially by Dr. Physic, who introduced it into the Pennsylvania Hospital; and by Dr. Gurdon Buck, who introduced it into the New York Hospital in 1837.

"Desault proposed to make the tuberosity of the ischium the *point d' appui* of the counter-extending force. Dr. Physic extended the outside splint to the axilla, thus bringing the direction of the counter-extension more in a line with the axis of the limb, and almost the entire pressure on the groin. Adhesive plaster bands were first proposed by Drs. E. Wallace and J. Crosby, and adapted to the New York Hospital apparatus by Dr. Lente, when Resident Surgeon of the establishment, in 1849 or '50. He reduced the outer splint again to its original length (to the crest of the ilium).

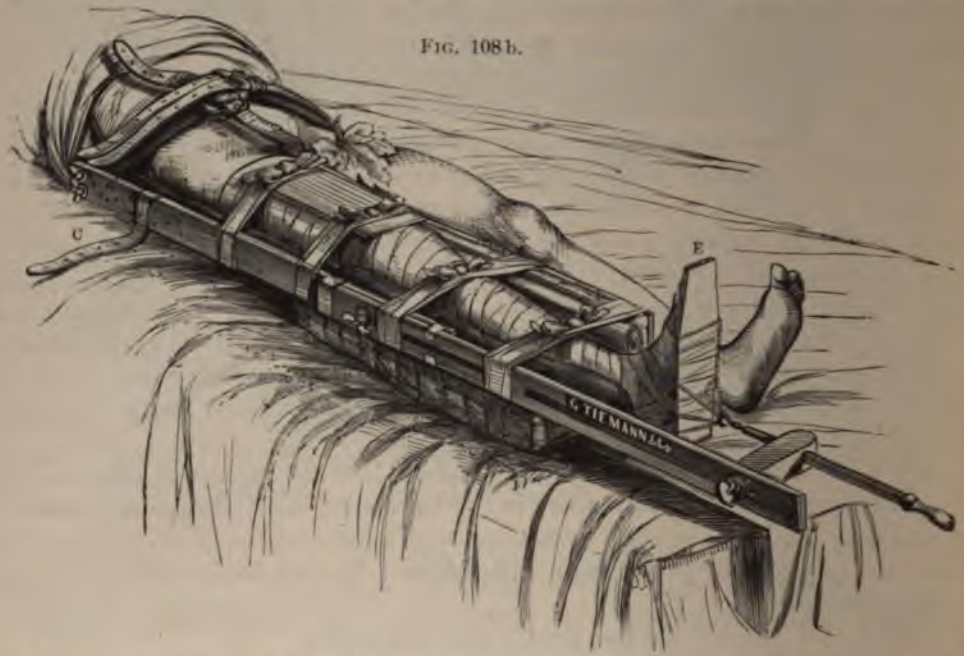
"From the top of this splint passes, in a curved form, over the abdomen to the median line, a steel brace, padded (*A*, Fig. 108a). To the end of this the pelvic band is buckled, and upon it slides a plate (*P*), fixed at any required point by a binding screw, to the bottom of which the perineal band is buckled, as seen in the engraving. The iron brace is attached to the splint by binding-screws, so that it may be shifted, and the splint thus adapted to either side of the body. The posterior portion of the perineal band passes under the thigh just below the tuberosity of the ischium, and is buttoned to the outer splint at a point about opposite the greater trochanter, or at such a point that, when extension is being made, the band shall exactly grasp the tuberosity, and not slip under it. After all the extension has been made, by means of the screw, that the patient can bear comfortably, the bands, being elastic, continue the extension, and by a very gradual and imperceptible force — a force, however, most difficult to resist — tire out the contracted muscles of the thigh, and still further elongate the limb. A spiral spring has also been enclosed in the ferule terminating the screw to which the hook for the extending band is fastened.

"Dr. Lente's remaining modification is a foot-piece (*D*, Fig. 108a), attached by a slide and thumb-screw to the mortice in the external splint, and capable of removal at pleasure. This is intended, first, to prevent a usual tendency to eversion of the foot; and secondly, by projecting a little beyond the toes, to take off the pressure of the bed-clothes."

APPLICATION OF THE APPARATUS.

"Having laid the patient on a firm, unyielding mattress, covered, if you prefer, with one or two folded blankets, and measured the respective lengths of the sound and injured limbs, comparing the results of two or more measurements (from the anterior superior spinous process to the internal maleolus), shave the leg from the knee to the ankle, apply a strip of adhesive plaster, three inches broad, and well warmed, to both sides of the leg, from just below the knee, allowing them to extend some inches below the sole of the foot. These free ends are to be warmed and smoothly stuck to a thin block a trifle wider than the ankle-joint, through holes on either side of which a strong cord is to be passed, to be attached to the hook or ring terminating the screw. A roller bandage is now to be applied from the foot to the groin, taking care to make considerable pressure over the adhesive strips. The long splint, having been adjusted to the length of the limb, and its cushion secured to it, is to be placed along the outside of the limb, its top just reaching to the crest of the ilium; then, having passed the pelvic band under the body, a guttered splint furnished with a thin cushion, long enough to extend from the tuberosity to the popliteal space, is to be passed under the thigh. At the same time the perineal band, previously buckled to the iron brace, is to be passed under the thigh and adjusted in its proper place. The extending band is now to be secured to the screw, while an assistant is making moderate traction on the foot, and at the same time pushing up the long splint; the object of this being to tighten everything before commencing extension with the screw, every turn of which will then give an increase of tension. If, after this, the splint is found to have been forced up a little higher than the crista ilii, the perineal band must be buckled at either end a little tighter, in order to rectify this. The inside splint may now be applied, and the concavity between its cushion and the leg a little more than filled up with folds of old blanket, or some such elastic material; so that, when the splints come to be bound firmly together, the inner condyle of the femur may not be painfully pressed upon, a circumstance which causes great discomfort to the patient; a guttered splint a little longer than the posterior must now be placed on the anterior aspect of the thigh, and then all the splints with the enclosed limb are to be encircled with four strips of strong muslin or linen about an inch and a half wide, and long enough to pass twice around the splints and tie in a bow-knot, two of these for the thigh and two for the leg. The arrangement of these bands is of considerable importance, as it is thus that we are enabled to dispense with the old-fashioned splint-cloth, a very troublesome contrivance, and to keep the splints from tilting forward without it. One end is to be passed under the limb, then around it in front, under again, and around in front, to be there tied to the other end. In doing this, it is seldom requisite to raise the limb sufficiently to disturb the patient. These bands are now to be loosely tied; and, having made a degree of extension, by means of a screw, corres-

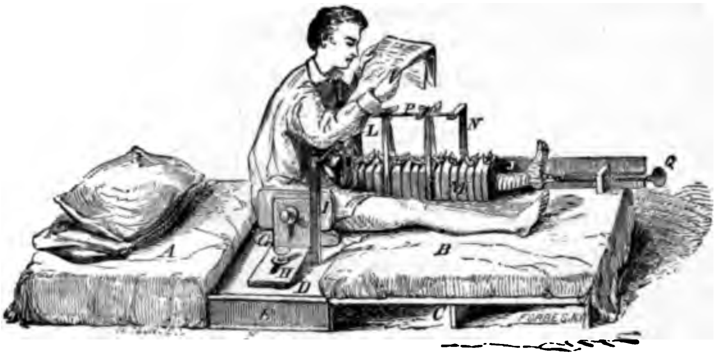
FIG. 108 b.



ponding to the amount of shortening, the foot-piece is to be screwed on so as to be in apposition with the outer surface of the foot. The bands are now to be firmly tightened and tied; and, if care has been taken to keep the inner condyle from undue pressure, they may be tightened to any required degree without any inconvenience to the patient. Next, the wedge-shaped cushion is to be placed under the apparatus; and, finally, the pelvic band is to be tightened as firmly as the patient can comfortably bear. A patient under treatment with this apparatus can attend to the calls of nature with very little inconvenience. He has only to raise his hips slightly with the aid of the leg and arm of sound side, while the bed-pan is slipped under him without deranging the apparatus in any degree. The peculiar arrangement of the perineal band secures it from being soiled, as it is removed from the immediate vicinity of the anus."

Fig. 109. Burge's Apparatus for Fractures of the Femur.

Price, $ 50.00.



For Instruments to Operate on Fractured Bones, See our Catalogue, Part I.

Bone Forceps, see Figs. 31, 39, 40, 41, 42, 43, 68, 69, 77, 79, 80, 81, 82.

Bone Drills, Figs. 34, 35, 36, 50, 61.

Pereosteotomes, Figs. 37, 38, 70, 71.

Saws, Figs. 1, 2, 3, 9, 16, 51, 52, 53, 54, 55, 57, 58, 60, 65, 66, 67, 78.

Trephines, 47, 48, 49.

Retractors, Figs. 62, 73, 74, 76.

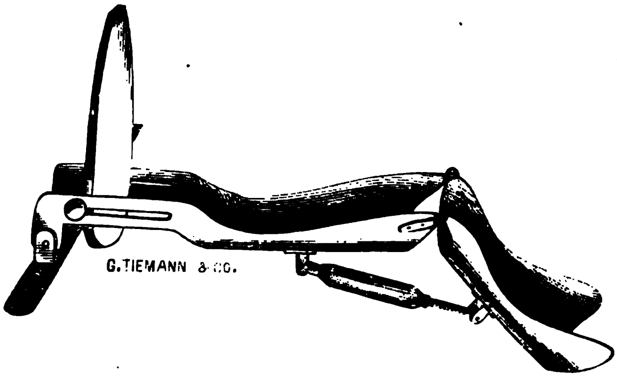
Mallet, Fig. 83.

Chisels and Gouges, 84, 85, 86.

Chain Saw Conductor, Fig. 60.

Fig. 110. Liston's Improvement of McIntire's Splint.

Price, $ 16.00.

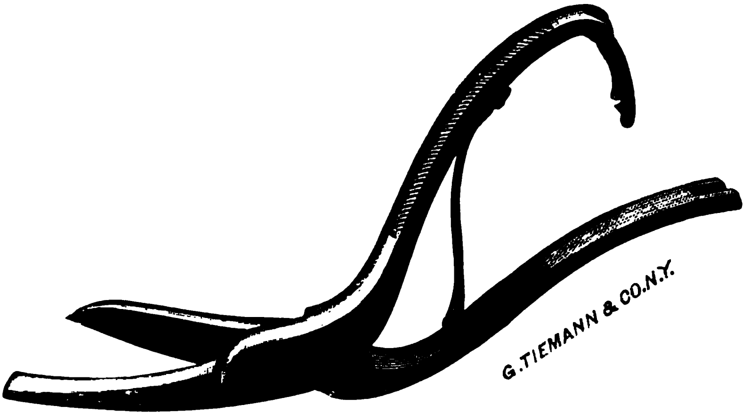


Liston's Splint is particularly applicable to the treatment of fractures of the condyles of the femur and of the upper extremity of this bone attended with a disposition to displacement of the lower end of the upper fragment It may also be advantageously employed in compound fractures attended with severe contusion and laceration of the integuments, as it affords an easy and comfortable position to the injured limb. It is applied to the limb by attaching the foot to the foot-board and the limb to the splint by a roller bandage. The angle of flexion is regulated by the screw. The splint is made of galvanized iron. We have on hand also, Inclined Plane Splints made of wood, see page 67.

Fig. 111. Henry's Shears,

(To facilitate the removal of plaster of paris dressing and starch bandages.)

Price, $ 7.50.



The illustration conveys a clear idea of the form and features of the instrument. The upper blade is heavy, with clean incisive power. The lower blade is longest and blunt-pointed, and made in the form of an elevator, which enables the operator to insinuate that point under the dressings, and, if necessary, press on the soft parts beneath without doing any injury. He can then cut as easily through the plaster of paris dressings as the tailor does heavy cloth with the ordinary shears. The handle is nearly at a right angle to facilitate movements, and adds to the cutting force."

Seutin's Bandage Shears, Price $5.00.

PRICE LIST OF CARVED WOOD SPLINTS.

Double Inclined Planes, of wood,	$7.00 8.00 9.00
Lining Splints, set of 20,	$5.00
Leg and Ankle Splints, per pair,	2.00
Forearm Splints, " "	1.25
Elbow Splint, plain,	1.50
Elbow Splint, jointed	2.50
Patella Splints,	1.50
Radius Splint,	1.25
Bond's Splint for Fracture of Radius,	2.25
Clavicle Splint,	4.00
Condyle and Humerus Splint,	1.00
Large Extension Splint, Bar and Garter,	7.00
Short Extension, without screw,	3.00
Interosseous Splint,	.75
Joint Arm Splint,	3.00
Dressing Splints, per pair,	1.25

Bass Wood Splints.

Set of 12 Straight Splints,	1.00
Set of 12 Radius Splints,	1.25

Hatter's Board for Splinting, per yard,	4.00
Gutta Percha for Splinting, per pound,	3.00 to 4.00

Plaster Paris Splinting, see pages 83, 99, 101, 102, 103.

Wire Splints, made to order.

NEW FRACTURE DRESSING.

At the meeting of the Society, Dr. Wackerhagen presented a new supporting material for fractured bones. It is prepared from plaster of Paris, shellac, glue and flannel. When soaked in hot water, it becomes soft and flexible in about two minutes, and can be readily moulded to the contour of the injured limbs. It is applied over cotton wadding, and will become hard and supporting in five minutes after the applicatian of the roller. Dr. W. believes it to be superior to anything of the kind now in use, because of its lightness, the short time it requires to become hard and supporting, and the low price, when compared with felt or gutta-percha. It is prepared by Tiemann & Co. Dr. W. has left samples at the Rooms for inspection.—*Proceedings of the Medical Society of the County of Kings, August*, 1878.

Apparatus for Fracture of the Patella.

The object of all apparatus for fracture of the patella is to counteract the action of the extensor muscles, which have a tendency to draw the superior fragment upwards, away from the lower. Some of the most efficient contrivances for keeping the fragments in coaptation are those sketched below. They are all simple, and will readily be understood by viewing the cuts Figs. 112 to 118.

Fig. 112.

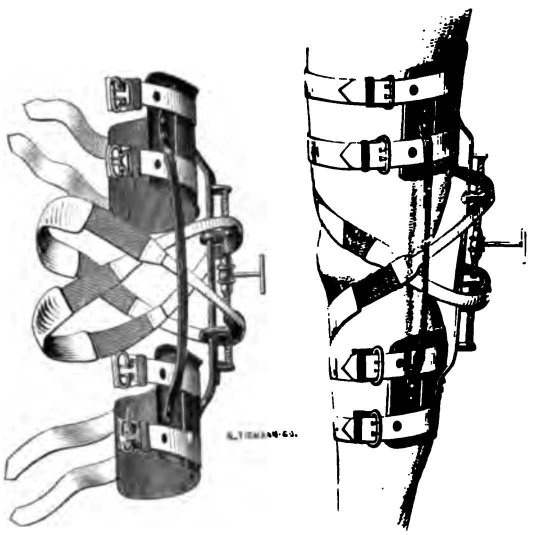
Turner's Apparatus for Treatment of Fracture of the Patella.

Price, $ 12.00.

DESCRIBED AND USED BY FRANCIS V. WHITE, M. D,

(Extracted from the *Medical Record*, July 15, 1867.)

"The apparatus consists of thigh and leg-pieces of sheet-iron, with two buckled straps attached to each, united by two lateral bars and one posterior bar of steel. To the posterior bar are two troughs (part of a circle), on a double reversed screw; and, by turning the key in opposite directions, the troughs separate or approach each other. The apparatus, being japanned, is always ready for new cases when cleaned. The apparatus should be applied in simple fractures as soon as possible; but if, in the opinion of the surgeon, it would aggravate existing inflammation, thereby jeopardizing the joint, it could be applied as a posterior splint, without using the coapting appliance, until anti-phlogistic measures make it safe. The apparatus, to be applied properly, should be well padded with flannel or other material, for protecting thigh and leg from the splint and straps; quadriceps femoris should be relaxed, the limb held by the thigh portion, and buckled; also buckle the leg portion. Use an anæsthetic if necessary. First fix the lower fragment, by drawing it up, smoothing the integuments down; this being held by an assistant, the surgeon applies a strip of adhesive plaster, of sufficient width to hold the fragment, and overlaps it sufficiently to prevent any tilting up, passes the free ends of the adhesive plaster around the upper trough, crosses them and applies them to the skin. The upper fragment being coapted, the integuments being smoothed up, a similar piece of plaster is applied around the lower trough as around the lower fragment. Interpose something where the plasters cross each other, to prevent their sticking together.



For firmness, use double strips of plaster. Snip the upper edge of the upper plaster, thus a rounded edge instead of a cutting edge will be presented to the integuments, avoiding in a degree excoriation. The apparatus should remain applied thirty or forty days. When new dressings are applied, the patella being held, cautious passive motion may be made. After the apparatus is permanently removed, the patient, to favor consolidation, should wear something to prevent too much use of the patella, say for four or six months, viz., an elastic knee-cap with a ring arrangement over the patella, or posteriorly a piece of gutta percha or leather strapped above or below the joint, either of which being softened by warm water can be applied, and allow of a certain flexion. Passive motion can be occasionally made, but not extreme, under six months.

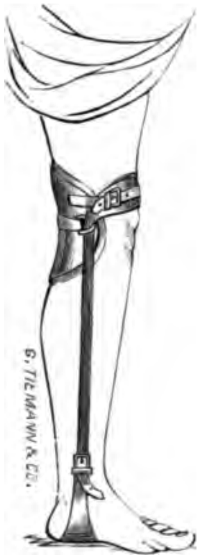
DIRECTIONS FOR MEASUREMENT.

1. Length from above the ankle to upper third of thigh. INCHES.
2. Right or left leg. - - - - - - - "
3. Circumference of thigh, - - - - - "
4. Circumference of calf, - - - - - - "

Fig. 113.

Lewis' Apparatus for Treatment of Fracture of the Patella.

Price, $ 6.00.



This apparatus consists of a broad pad, resting on the popliteus, to keep the knee extended, and a narrow pad, fitting the upper border of the patella. A strap connected with the latter one is first passed through a ring attached to the popliteal pad, then continued down the leg on each side, being finally buckled to a lined foot-pad. This makes the foot a fixed point for extension, and the ring through which the strap passes gives it also a direction backwards, maintaining a firm hold of the upper fragment of the patella, whilst the lower fragment is readily kept in place by a strip of adhesive plaster.

DIRECTIONS FOR MEASUREMENT.

1. Circumference above knee. . . . *Inches.*
2. Length from sole of foot to knee. . . .

DR. VON BRUNS' COTTON LINT.

WOUND-DRESSING-COTTON. Prepared by the International Manufactory of wound dressing materials. *Schaffhausen.*

Figs. 114a, 114b.

Boisnot's Apparatus for Treatment of Fracture of the Patella.

Price, $ 12.00.

FIG. 114a.

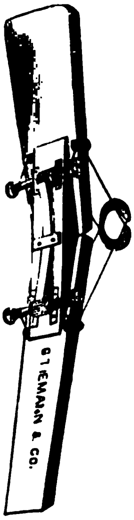
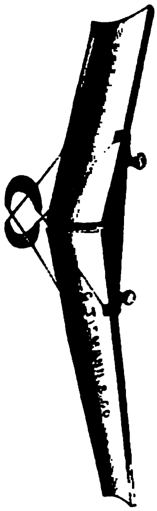


FIG. 114b



This apparatus is adapted to the limb at an angle natural to it, and therefore consistent with coaptation of the fragments. The splint is concave, to suit the convexity of the limb. The semilunar pieces are of stout leather, doubled and crimped. The cords pass over pulleys to revolving transverse pieces, which are protected from slipping by spring and ratchet. The patient is not confined to bed.

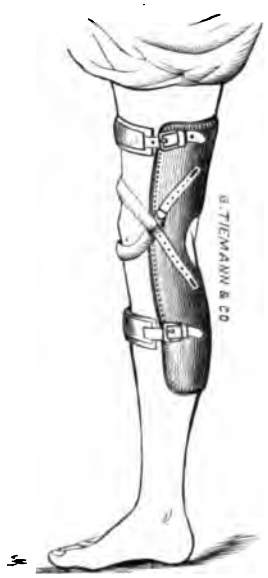
DIRECTIONS FOR MEASUREMENT:

1. Length from above the ankle to upper third of thigh, . . . *Inches.*
2. Circumference of thigh, . "
3. Circumference of calf, . . "

Fig. 115.

Hartshorn's Apparatus for Treatment of Fracture of the Patella.

Price, $ 7.00.



This apparatus consists of a light tin splint fitting the posterior half of the limb. It is covered with morocco and is made to lace or to buckle in front. The coapting appliances are a pair of strong webbings or straps, well padded in the middle, which are drawn across the fragments obliquely, tightened by means of buckles or hooks. The application is very simular to that of Turner's Splint.

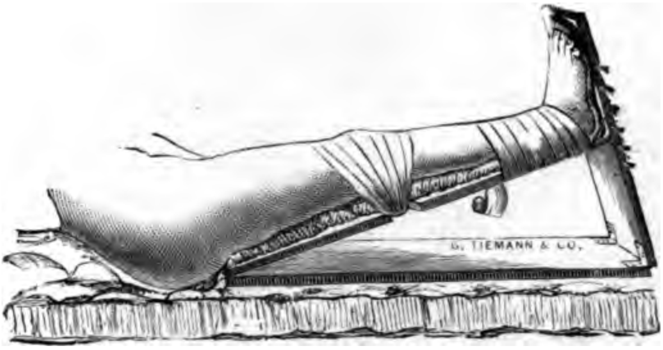
DIRECTIONS FOR MEASUREMENT:

1. Length from above ankle to upper third of thigh, ... *Inches.*
2. Right or left leg? . . "
3. Circumference of thigh, . . "
4. Circumference of calf, . . "

Fig. 116.

Hamilton's Apparatus for Treatment of Fracture of the Patella.

Price $ 8.00 to $ 10.00.


G. TIEMANN & CO.

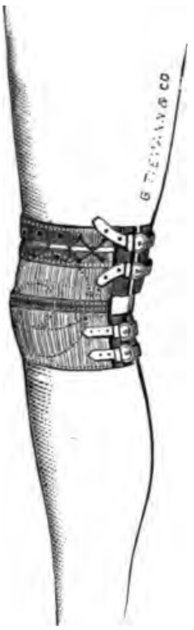
[Extracted from *Hamilton on Fractures and Dislocations.*]

"The dressing which I have usually employed in the treatment of this fracture, consists of a single inclined plane, of sufficient length to support the thigh and leg, about six inches wider than the limb at the knee. This plane rises from a horizontal floor of the same length and breadth, and is supported at its distal end by an upright piece of board, which serves both to lift the plane and to support and steady the foot. The distal end of the inclined plane may be elevated from six to eighteen inches, according to the length of the limb and other circumstances. Upon either side, about four inches below the knee, is cut a deep notch. The foot-piece stands at right angles with the inclined plane, and not at right angles with the horizontal floor. It may be perforated with holes for the passage of tapes or bandages to secure the foot. Having covered the apparatus with a soft and thick cushion carefully adapted to all the irregularities of the thigh and leg, especial care being taken to fill the space under the knee, the whole limb is now laid upon it, and the foot gently secured to the foot-board, between which and the foot another cushion is placed, The body of the patient should also be flexed upon the thigh, so as the more effectually to relax the quadriceps femoris muscle. A compress made of folded cotton cloth, wide enough to cover the whole breadth of the knee, and long enough to extend from a point four inches above the patella to the tuberosity of the tibia, and one-quarter of an inch thick, is now placed on the front of and above the knee. While an assistant presses down the upper fragment of the patella, the surgeon procedes to secure it in place with bands of adhesive plaster. Each band should be two or two and a half inches wide, and sufficiently long to enclose the limb and splint obliquely. The centre of the first band is laid upon the compress, partly above and partly upon the upper fragment, and its extremities are brought down so as to pass through the two notches on the side of the splint, and close upon each other underneath. The second band, imbricating the first, descends a little lower upon the patella, and is secured below in the same manner. The third, and so on successively until the whole of the compress and knee is covered, is carried more nearly at right angles around the leg and splint, the last band passing obliquely from below the ligamentum patellæ upwards and backwards. The dressing is now completed by passing a cotton roller lightly around the whole length of the splint, commencing at the toes and ending at the groin."

Fig. 117.

Tiemann & Co's Knee-cap for After-Treatment of Fractured Patella.

Price, $5.50.



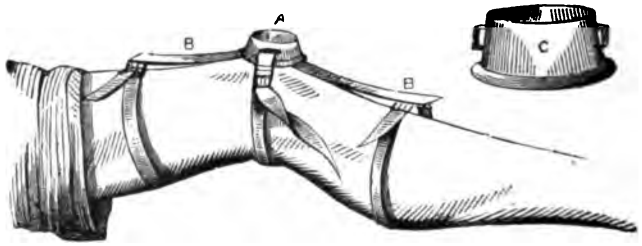
Authorities on surgery say that great care must be taken not to rupture the ligaments of the newly formed union, which so often happens after recovery of the patient from fractured patella. For the purpose of guarding against such a recurrence, we make the apparatus shown, Fig. 117. It consists of a knee-cap made of buckskin or satin jean, which is adjustable to the knee by buckles or laces. It is provided with a pair of coaptation pads, to retain the newly united patella in place. These pads are arranged to approximate by drawing on laces, as shown in the upper border of the cap, represented Fig. 117. It affords the patient exercise of the knee-joint, the best guard against the danger of anchylosis, at the same time preventing any undue strain on the newly united upper fragment of the patella.

DIRECTIONS FOR MEASUREMENT:

1. Circumference above knee, . . . *Inches.*
2. Circumference of knee, . . . "
3. Circumference below the knee, . . . "

Fig. 118.

Steel Spring and Rubber Cup for Treatment of Fractured Patella.

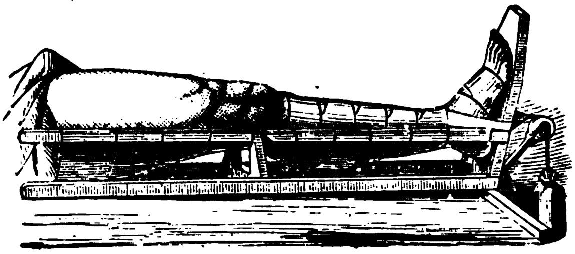


Price, $6.00.

Apparatus for the Treatment of Fracture of the Tibia and Fibula.

Fig. 119. Hodgen's Apparatus for Complicated Fractures of the Lower Extremities.

Price, $6.00.



This apparatus consists of a wooden frame, formed of four square bars of the length of the lower extremity. These bars are united by a crescent-shaped piece of wood situated at the back of the knee, and by a foot-board below, two on either side of the leg. The lower two serve the purpose of holding together, and giving the apparatus an inclined plane; the upper bars serve as points of attachment for a number of linen straps or rollers to suspend the limb. They are placed side by side and fastened with pins, and constitute a perfect bed, having the advantage of adapting themselves to the differences in the conformation of the limb. The foot is retained to the foot-board by long adhesive plaster strips being passed around the foot-board and carried upwards and secured to both sides of the leg with roller bandage, leaving a sort of loop beneath the foot-board, through which a rope is passed and attached to a little bag weighted with sand, for the purpose of keeping up extension. Counter-extension is made by a perineal band, the end of which is secured to the head of the bed. A long cross-bar under the foot-board, resting on the bed, prevents the apparatus from tilting. Bricks may be placed under the inferior legs of the bed, to give the apparatus an inclination towards the pelvis. One of the advantages of this instrument is that each of the bands of linen may be removed separately, any wound dressed and the band reapplied without displacing the others.

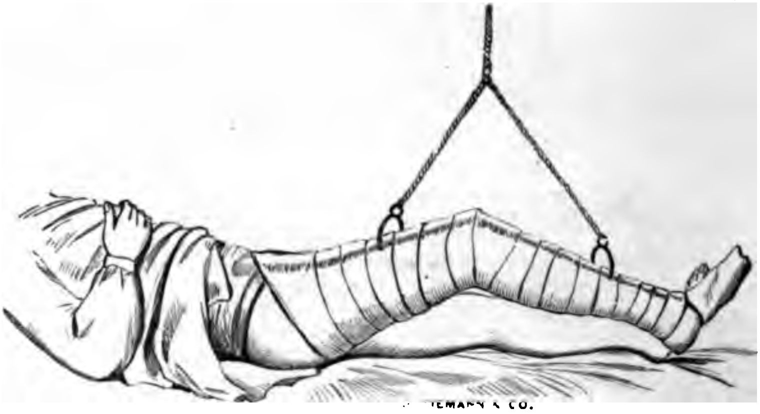
ROHLAND'S STYPTIC COTTON.

Price, per box, 35 cents.

Promptly arrests bleeding, either active or passive hemorrhages. Apply a thin layer of this cotton with gentle pressure to the surface of the bleeding wound. If desired, it can be easily removed a few minutes after application, although the healing process will be accelerated by leaving it on. It should be kept dry.

Fig. 120. Smith's Anterior Splint for Treatment of Gunshot Fractures of the Lower Extremities.

Price, $3.00.



See also Fig. 102.

We make to order all other SUSPENDING APPARATUS, and SALTER'S CRADLE.

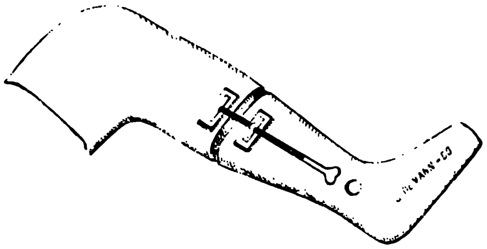
Also CARVED WOODEN SPLINTS for the leg and ankle.

LINING SPLINTS, made of thin boards of wood held together by a sheep-skin lining.

BAUER'S WIRE SPLINTS, a frame made of iron wire covered with gauze.

Fig. 121. Raphael's Modification of Pott's Splint.

Price, $5.00.



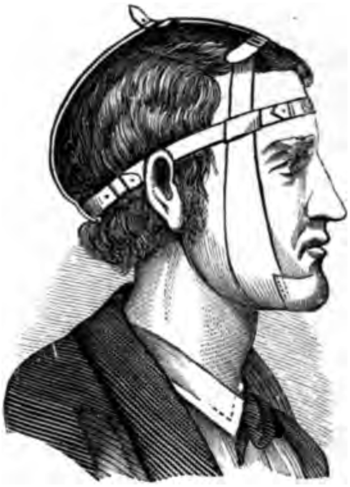
Used for fractures of the fibula, when they occur about two or three inches above the lower end, usually resulting from a fall upon the foot, in consequence of which the foot is violently twisted outwards, and sometimes the ankle is itself dislocated. The above is a modification of Pott's Splint, consisting in the addition of the screw for extension.

Pott's original dressing is composed of an outside angular splint seven inches in width, constructed of deal board with a projection to accomodate the foot; it is well padded, and has a hole with bevelled edges to accommodate the external maleolus. It is placed on the outside of the limb, which must be flexed on the abdomen, and the leg kept at a right angle with the thigh. On the inside of the leg a padded straight splint of felt, leather, or paste-board, extending from the ankle to the knee, is placed, and the two secured by roller bandage. The limb is allowed to rest on its outer side.

Carved Wooden Splints are also used. See also Depuytren's Splint.

Bandage for the Treatment of Fracture of the Lower Maxillary.

Fig. 122. Hamilton's.



Price, $ 5.00.
Silk, extra fine, $ 12.00.

A firm leather strap passes under the chin and is buckled over the top of the head. It is stayed by two counter-straps of linen webbing. One of these is looped upon the maxillary strap at a point just above the ears, and may be elevated or depressed to fit different heads. This strap is buckled under the occiput posteriorly, and across the forehead anteriorly. A vertical strap passing over the top of the head in the line of the sagittal suture, unites the maxillary and the occipital strap. To prevent the maxillary strap being displaced backward, a chin-piece is fastened to it.

ROLLER BANDAGE.

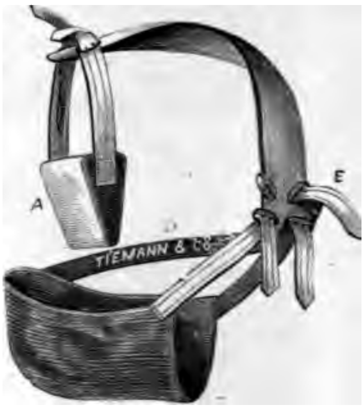
Roller Bandage, per pound, - - - - - - - -	$1.50
Adhesive Plaster, per yard, - - - - - -	.75
Strong Adhesive Plaster, on twilled goods, per yard, - - -	1.50

Apparatus for the Treatment of Fractures of the Clavicle.

Fig. 123.

Levis' Apparatus for Treatment of Fracture of the Clavicle.

Price, 5.00, each, for either size.

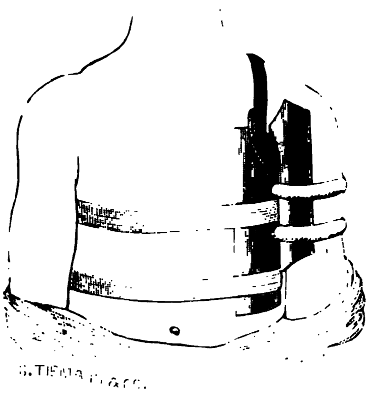


(*A*) is a wedge-shaped pad for the axilla, which is put in place thick side up. Two straps fastened to this pad pass directly upwards, and buckle to the broad supporting band on the accromion of the afflicted arm. This band is then passed across the back and over the shoulder of the sound side, and terminates in front of the chest (*E*). A sling to support the arm, elbow flexed, is buckled to the broad band. A strap (D) is attached to the back of the sling a short distance above the elbow, and passed obliquely across the back and buckled to the supporting band in front. The extra buckle comes in play when the apparatus is to be reversed, in using it for the other side. The shoulder is kept out by the wedge, up by the sling, and back by the strap (*D*).

These apparatus are made of four sizes: two sizes for adults, two sizes for children.

Fig. 124. Richardson's Splint for Fractures of the Clavicle, Scapula and Humerus.

Price, $ 6.00.


G. TIEMANN & CO.

"It is composed of three parts, and has three points of attachment, viz., to the side, axilla, and arm.

"The arm and body pieces are semi-cylindrical in shape, made of hard rubber, and fastened together by means of rivets, with sufficient space left between them to allow the passage of straps of adhesive plaster. The crescentic pad is received as a crutch in the axilla.

"For fracture of the clavicle, the crutch is crowded firmly in the axilla, and the arm-piece secured to the arm by circles of adhesive straps: the shoulder is then raised, and the arm carried backwards until the fragments are brought into position, when the body-splint and crutch are secured alike by straps of plaster. If thought desirable, one strap may be passed over the opposite shoulder.

"For fracture of the scapula, the arm is carried forward instead of backward, before the splint is secured to the side.

"For fracture of the humerus, the arm is secured in its most natural and easy position. In all other respects the splint is adjusted the same as for fracture of either of the above-mentioned bones.

"After the splint has been applied, the arm may or not be flexed at a right angle on the chest, and supported by a sling from the neck."

Four sizes of this splint are made: two for adults, and two for children.

FOX'S CLAVICLE BANDAGE, Fig. 147.

Price, $ 5.00.

Is very similar, in principle, to the one described on page 76.

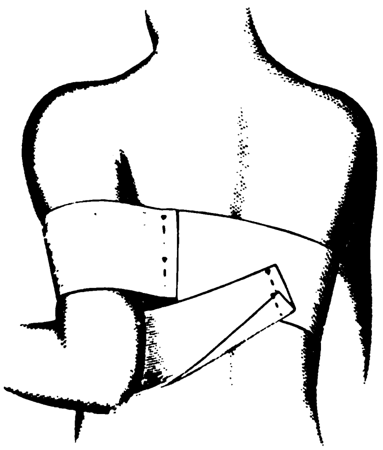
Figs. 125, 126, 127.

Sayre's Dressing for Fracture of the Clavicle.

(Extracted from the *American Practitioner* for July, 1871.)

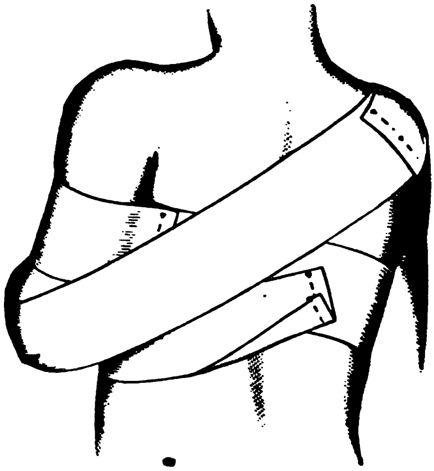
"After drawing the arm backward and retaining it there by a strip of adhesive plaster, pass another piece of plaster from the well shoulder across the back, and by pressing the elbow well forward and inward the first plaster around the middle of the arm is made to act as a fulcrum, and the shoulder is necessarily carried upward, outward, and backward; and the plaster, being carried over the elbow and fore-arm (which is flexed across the chest) to the opposite shoulder, the place of starting, and then secured by pins or stitches, permanently retains the parts in postion. Strong and good adhesive plaster (Maw's moleskin is the best) is cut into two strips, three or four inches wide (narrower for children); one piece long enough to surround the arm and go completely around the body, the other to reach from the sound shoulder around the elbow of the fractured side and back to the place of starting. The first piece is passed around the arm just below the axillary margin and pinned or stitched in the form of a loop sufficiently large to prevent strangulation, leaving a large portion on the back of the arm uncased by the plaster. The arm is then drawn downward and backward until the clavicular portion of the pectoralis-major muscle is put sufficiently on the stretch to overcome the sterno-cleido-mastoid, and thus pull the inner portion of the clavicle

FIG. 125.



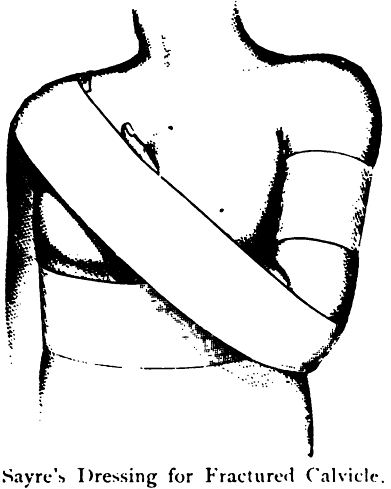
down to its level. The plaster is then carried smoothly and completely around the body, and pinned to itself on the back to prevent slipping, as seen in Fig. 125. This first strip of plaster fulfills a double purpose: first, by putting the clavicular portion of the pectoralis major muscle on the stretch, it prevents the clavicle from riding upward; and, secondly, acting as a fulcrum at the center of the arm, when the elbow is pressed downward, forward, and inward, it necessarily forces the other extremity of the humerus (and with it the shoulder) upward, outward, and backward; and it is kept in this position by the second strip of plaster, which is applied as follows: commencing on the front of the shoulder of the sound side, drawing it smoothly and diagonally across the back to the elbow of the fractured side, where a slit is made in its middle to receive the projecting olecranon. Before applying this plaster to the elbow an assistant should press the elbow well forward and inward (figure 126), and retain it there, while the plaster is continued over the elbow and fore-arm (pressing the latter close to the chest, and securing the hand near the opposite nipple); crossing the shoulder at the place of beginning, it is there secured by two or three pins, as seen in figures 126 and 127.

FIG. 126.



Sayre's second bandage for Fractured Clavicle. Back view.

FIG. 127.



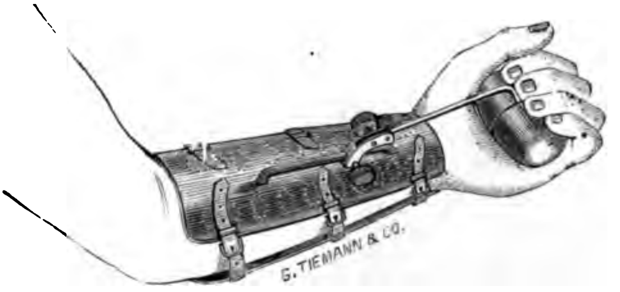
Sayre's Dressing for Fractured Calvicle. Front view

When this has been done the deformity will have entirely disappeared, the fractured bones will be accurately adjusted, and as long as the strips of plaster maintain their position no amount of force can displace them. I have repeatedly tested this fact before my class by seizing the patient by the arm of the fractured side and whirling him like a top on his feet, without ever causing the slightest displacement or giving the slightest pain. By this plan of treatment the patient is only detained from his daily advocation a sufficient length of time to properly adjust the strips of adhesive plaster."

Price of Adhesive Plaster,	per yard	$ .75
Price of Moleskin Adhesive Plaster, (spread on twilled goods)	per yard	$1.50
Price of Roller Bandage,	per pound,	$1.50

Fig. 128. Hewit's Splint for Colles' Fracture.

Price, $ 7.00.



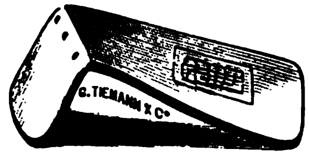
This splint is designed, in addition to its function as a retentive splint, to promote passive motion in the fingers and wrist-joint as well as to give support to the hand. It accomplishes these objects as will be seen by the cut, by means of the rod connected with the ball grasped by the hand and is joined to the sliding-bar on face of the splint by ball and socket joint. This joint enables the hand to make limited motions of flexion and extension, and also of pronation and suppination. The natural tendency to relax and contract the fingers promotes this intention.

Fig. 129. Shrady's Splint for Colles' Fracture.

Price, $ 2.00.

This apparatus was devised by Dr. Shrady for the purpose of correcting extreme deformity in cases of Colles' fracture of the radius. It is calculated to keep the hand in the double relation to the forearm of flexion, and of deflexion towards the ulnar margin.

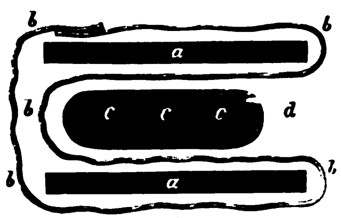
FIG. 129.



Some of these splints are made with a short hand-piece adapting itself to the palm proper, or with a long hand-piece extending from the wrist to the tips of the fingers. For the employment of either of these forms the surgeon must of course be governed by the peculiar indications of the case. We also make the splints with adjustable flexion and deflexion.

The fragments being placed as near as possible in apposition by flexing the wrist and deflecting the hand, the splint is applied to the palmer surface of the forearm.

By means of a strip of adhesive plaster three inches in width, which is made to form a sort of lateral sling or loop for the ulnar portion of the wrist, the tendency to lateral displacement of the ulna is in a great measure overcome. This loop, as seen in the cut, embraces the wrist and splints (the usual dorsal splint being always used). The ulnar margin of the wrist is thus in a sling formed by the splints and the plaster, the radial margin of the wrist being free.



a a.—Splints.
b b b.—Plaster.
c c c.—Wrist.
d.—Radial margin of wrist.

The ulnar margin of the wrist is thus made a very efficient fulcrum. In cases of extreme lateral displacement, a suitable margin of wood is tacked to the ulnar margin of the palmar splint to give additional purchase.

The splints are kept parallel to each other by suitable strips of plaster, and the hand, by the same means, is secured to the hand-piece. The radius and ulna are kept in their proper relations to each other by the usual precaution of directing the palmar surface of the forearm and hand upwards and inwards looking towards the face, the whole apparatus being suspended at a right angle with the arm by a sling.

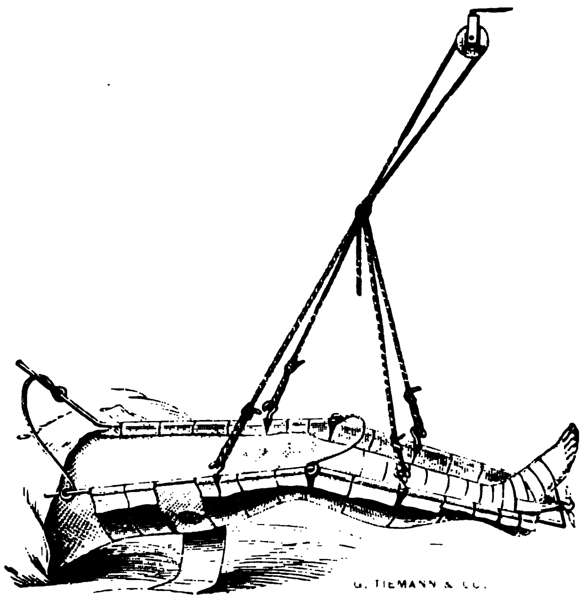
In order to prevent undue stiffness of the wrist and fingers by too long confinement, Dr. Shrady advises that passive motion be resorted to early, and persisted in every two or three days. This is done, without disturbing the fragments, by grasping the apparatus firmly at the wrist and freeing the hand.

Miscellaneous Splints.

DOUBLE INCLINED PLANES OF WOOD, see Fig. 116.

Fig. 130. Hodgen's Suspending Apparatus.

Price, $ 5.00.



This is a modification of Nathan R. Smith's Anterior Splint. See Figs. 102, 120.

We have on hand CARVED WOODEN SPLINTS made to fit the legs, arms and hands.

Hamstring Splints for fracture of the patella, in sets or by the pair or piece.

Elbow Splints, plain and jointed.

Bond's Splints, Fracture Boxes Gutta Percha and Hatter's Board, for splinting.

Detmold's Suspension Splints.

Cane Splints, united with copper wire.

And make to order any other Fracture Apparatus desired.

Price of Adhesive Plaster, per yard, - - - - - -	$ .75
" " Moleskin " on twilled goods, per yard, - - -	1.50
" " Roller Bandage, per lb., - - - - - -	1.50

Figs. 131, 132, 133. Apparatus for Reducing Dislocations and for Extension and Counter-Extension.

FIG. 131.

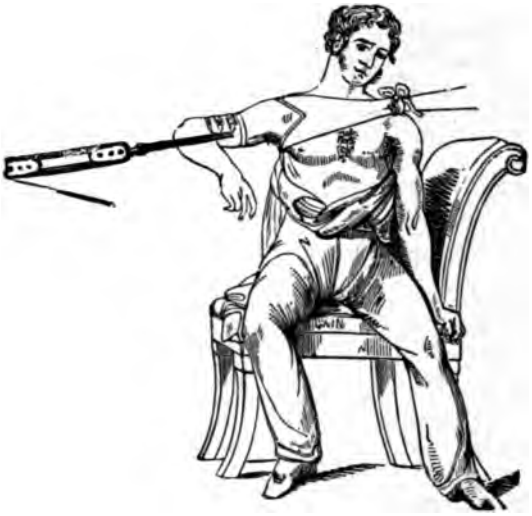


FIG. 132.

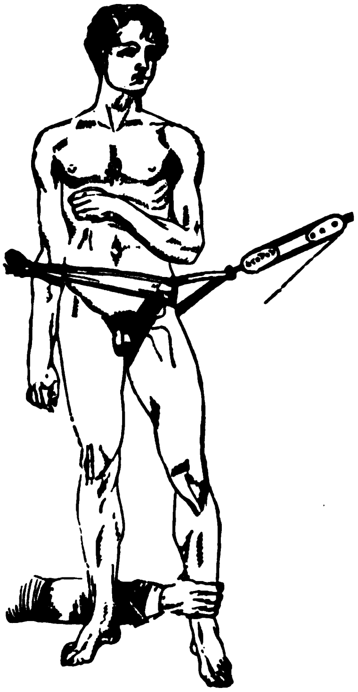
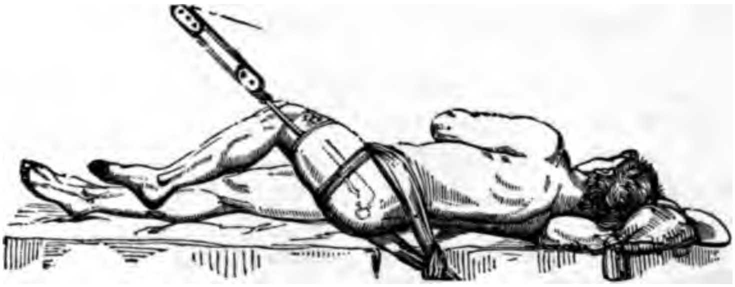


Fig. 133.



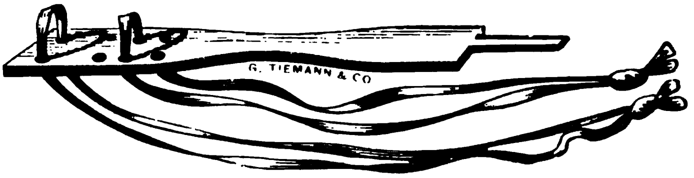
Figs. 131, 132, 133. Dislocation Pulleys made of brass, with three rollers, a strong steel hook, and sufficient cord. Price per pair, $7.00.

Sayre's Suspension Apparatus, Fig. 193.

Andrew's Apparatus for Inflamed Joints, Fig. 186, &c.

Fig. 134. Levis' Splint for Reducing Dislocation of Phalanges.

Price, $ 1.50.



To apply this instrument: The finger is passed through the loops, and, by dra ing on the tapes and then winding them around the projecting stem in opposite dire tions, and finally tying them together, a firm grip is obtained. This enables th operator to apply both extension and flexion, or leverage in any direction. Th proximal end of the phalanx may be lifted, or even rotated, so as to allow one si of the bone to approach the socket before the other. It is a simple and cheap instr ment, but one that every surgeon ought to possess. Fig. 135 represents it applie

FIG. 135.

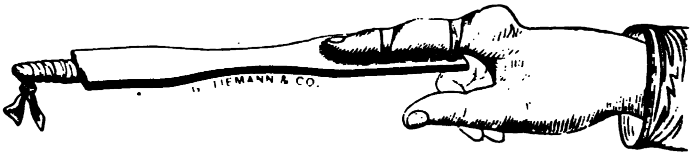
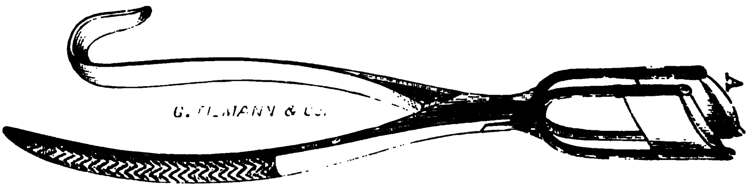


Fig. 136. Luer's Forceps for Luxation of Fingers or Toes.

Price, $ 8.00.

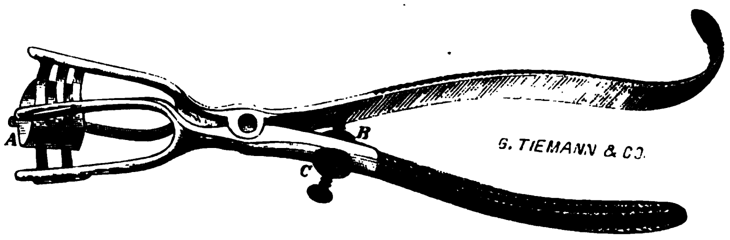


This instrument is made in the shape of a pair of forceps, the strong jaws of which in place of being concaved, are bifurcated, and carry between their rods straps o strong webbing, doubled and drawn over them; A, the spaces, being filled up b slices of cork or india rubber. This construction and the length of the arms of the lever, exercise sufficient power to seize and hold the luxated member without contusing the soft parts.

MARINE LINT, in a tin box, weighing about one pound, price, $ 1.00.

Fig. 137. Charriere's Luxation Forceps.

Price, $9.00.

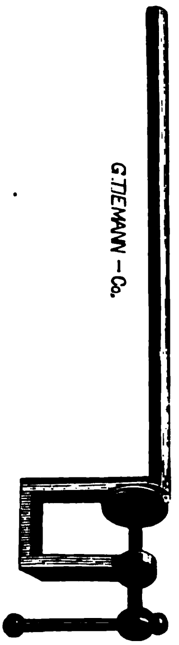


This pair of forceps is jointed like a compass. The jaws consist of forks of two stems each, equi-distant, to which four leather straps are fastened, intercrossing each other in such a manner as to form a double floating knot, A, that opens or shuts as the handles of the forceps are approached or separated. The action of this double knot is regulated by a screw and two nuts, C, B, enabling the operator to diminish, augment, or fix the amount of pressure at will.

Fig. 138. Stanchion for Counter-Extension in Application of Plaster Paris Dressings.

Price $5.00 to $10.00.

(Extracted from *The Principles and Practice of Surgery*, by F. H. HAMILTON.)



"The following is the usual mode of applying this dressing at Bellevue: The patient is placed with his nates overhanging one corner of a table, or with his body, shoulders and head resting upon a mattress elevated by blankets about one foot from the table, but terminating about two feet from its lower end. The perineum is pressed against an iron stanchion, which is firmly screwed upon the lower end of the table, and wound with heavy flannel cloth. The nates are then suspended by a sling which passes under the small of the back and which is supported by a wooden bar projecting horizontally from the top of the stanchion to some point of support of equal elevation beyond the head. Compound pulleys are now attached to the foot, and the exhibition of the anæsthetic commenced. In some cases, as is represented in Fig. 139, a plaster-of-paris bandage is first applied to the foot and lower portion of the leg, an hour or two before the fracture is reduced, and when this has become hard, the extension is applied. The patient being fully under the influence of the anæsthetic, traction is made upon the pulleys until the shortening is supposed to be overcome and the fracture reduced. The direction of the extension must be in the line of the axis

of the body, it having been observed that when the plaster is applied with the
abducted, too much pressure is brought upon the perineum when the limb is
dropped into line; and i
limb is adducted whe
plaster is applied, the dr
will be too loose abou
groin in the straight po
The bandages, saturated
plaster, are applied ov
whole limb, from belo
wards, including the
Occasionally the suc
turns of the roller are re
ed by broad pieces of f
or of patent lint, dipp
the fluid-plaster. The
ber and thickness c
successive layers mu
determined by the ap
necessities of the case,
ally four or five layers of roller being required, at least upon the thigh.
omitted to state that excoriations caused by the dressings have been notice
frequently in the groin and gluteal fold; this may, however, be avoided by p
a heavy piece of dry flannel over these parts previous to the application
plaster. The dressing being completed, the extension is continued fifteen or t
minutes until the plaster has become hard.

FIG. 139.

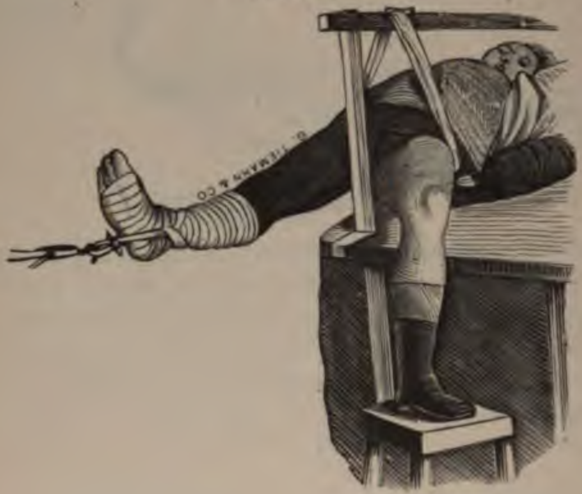
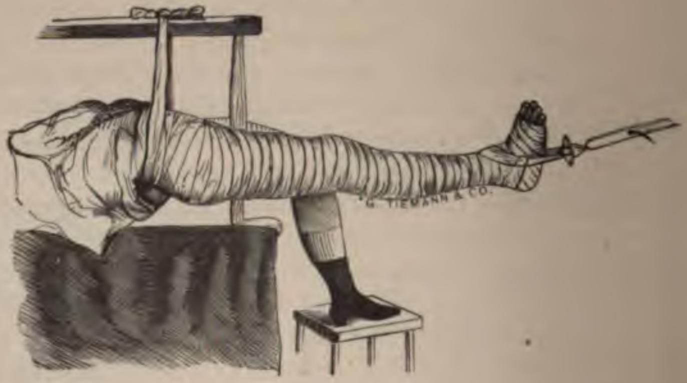
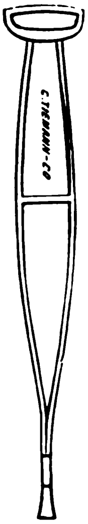


FIG. 140


G. TIEMANN & CO.

"In case the plaster was not applied to the foot and lower portion of the leg
to the dressing of the fracture, this may now be done; or the patient may be l
bed and permitted to recover from the influence of the anæsthetic before comp
the dressing. On the second or third day, after the reduction of the fracture,

of our patients have been permitted to go about on crutches; a practice which, although it seems to be attended with certain hazards, possesses at least this advantage, that it enables the patient to preserve his general health. It is not improbable, also, that it prevents that atrophy and shrinkage of the limb which would otherwise ensue, and which, when it occurs, renders it necessary to open and re-adjust the dressings."

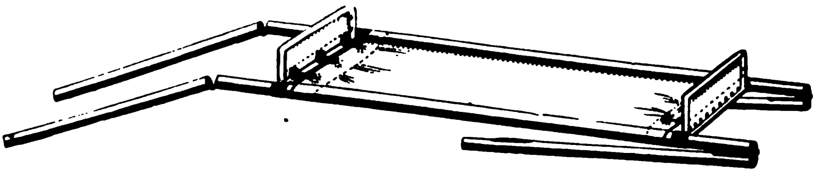


Crutches.

Fig. 141. Crutches.

Whittemore's Patent, Lancewood, rubber bottoms, per pair,	$12.00
Whittemore's Patent, Maple wood, rubber bottoms, per pair,	11.00
Plain Maple Crutches, per pair, - - - - -	7.00
Plain Hickory Crutches, per pair, - - -	4.00
Hickory Crutches, rubber bottoms, per pair, - - -	5.00
Children's Crutches, per pair, - - -	$3.00 to 5.00
Sockets for Crutches with rubber, per pair, - - -	4.00
Crutch rubbers, - - - - - -	.45

Fig. 142. Folding Litter for Carrying Wounded Persons.



Litters of all patterns made to order at various prices, depending upon style and finish.

In these pages we have enumerated and described some of the most useful apparatus in common use in America and Europe. There are many other appliances resorted to in hospitals and private practice, which we shall be happy to furnish on application. New devices are carried out according to the views of surgeons favoring us with their orders.

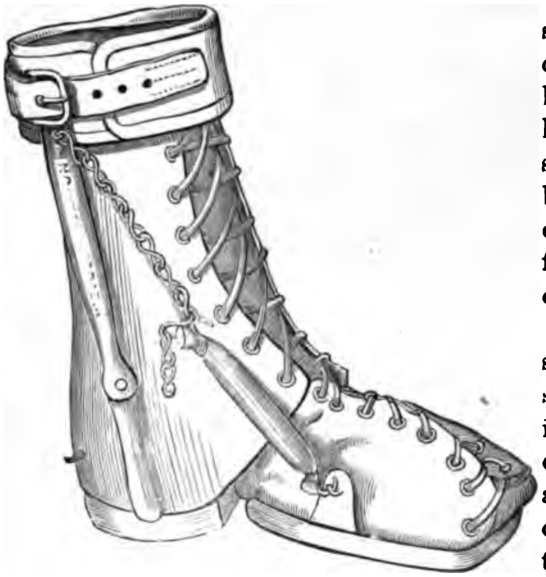
Fig. 143a, 143b. Barwell's Sayre Shoe.

DR. RICHARD BARWELL ON INFANTILE PARALYSIS AND ITS RESULTING DEFOR

Extracted from the London Lancet, Feb. 1874.

Price for one Shoe, $15.00.
Price for a pair, $30.00.

Fig. 143. (a)



A shoe divided in the middle
sole (medio-tarsal joint), the fro
connected with the posterior pa
ball and socket joint. The
leather of back and front of the
similarly separate; thus an inc
ber spring attached to the up
enables the surgeon to work
front of the foot upwards, inw
outwards, according to the def

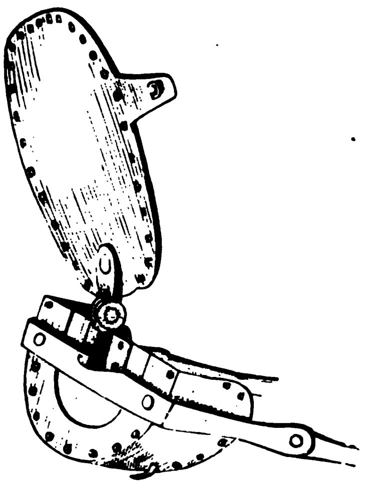
SAYRE SHOE, AS MODIFIED.—C
sides of the ankle are hinged in
supporting calf band, and chai
india-rubber spring either for
or outside of foot; on the out
also another spring, running al
outer border of the sole, may l
to overcome adduction.

I found that the ball of the joint in the original Sayre shoe, being somewhat
was apt to wear out on the lower part, and the entire separation of the heel fr
front of the foot permits water to enter and keep the stocking wet. To obvi
former inconvenience, I proposed to resolve the compound movement of ba
socket joint into its three elements, and have carried out that idea in the n
represented in Fig. 143a.

The shoe thus modified—and I must beg my friend Dr. Sayre to pard
making any change in his admirable inventions—answers every purpose ext
well, especially while a tolerably marked deformity, though not a severe on
exists. It is especially adapted to the middle phase of clubfoot, and is by t
best instrument yet invented for the treatment of this disease. For cases l
vere or further recovered I have invented the following apparatus, which,
most others, is worn inside an ordinary-looking boot, and attracts no attention
limb. My patients thus walk in the street, and, the lameness being overcome,
ing unusual is observed.

The sole of modified Sayre shoe, showing the three movements into whic
and socket movement is resolved: pivot (rotation) behind, flexion in middl
abduction and adduction in front.

Fig. 143. (b)



The sole is made of steel, of spring temper, rather thicker than a calling card, jointed in the medio-tarsus for abduction and adduction only, and that merely for those cases where necessary. Eversion or inversion, flexion and extension, are produced by the bend and twist of the steel sole. The lappets for lacing are of a strong cotton material. From the heel on the outer side runs upward a metal rod to a level with the ankle-joint, at which point is hinged, in the sense of flexion and extension, a steel spring, connected above to a calf piece. This spring is to be bent outward or inward, according as the cases is valgus or varus.

To put on this shoe its whole sole is to be turned, so as to fit on the sole of the foot, and the front part twisted inward or outward, as necessary for either deformity, so that while the sole of the shoe is fitted and adapted to that of the foot, the front lappet is laced; and then, while still keeping, by manual pressure, the shoe-sole fitted, the back lappet is also laced. This being completed, the steel spring is brought to the leg, and the calf-piece adapted, while the shoe-sole and front of the apparatus is released. By this means every part of the foot is subject to spring pressure—the front to the bend and twist of the spring sole, the back to the action of the vertical spring. Besides this, however, and to supplement any deficient force, india-rubber springs are stretched from the calf-piece to the sole; and, if necessary, an abduction spring is carried along the outer side. All this apparatus is concealed by an ordinary boot, if for a boy wearing trowsers; if for one wearing knickerbockers, or for a girl, the boot called "polonaise," coming high on the leg, may be used.

This form of mechanical shoe I have found very valuable in the cases of lameness I have described as jactus internus and externus; also in cases of paralytic clubfoot in the stage of recovery. Of course, with all and every of the contrivances above described, patient and persistent galvanism, as also injection of strychnia, must be employed.

ROHLAND'S STYPTIC COTTON.

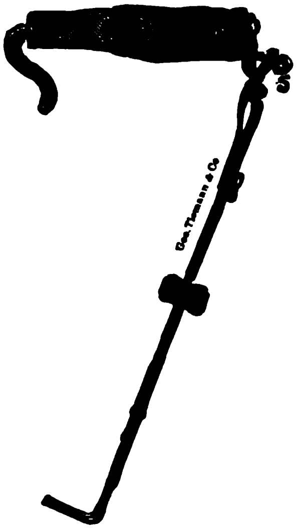
Price, per box, 35 cents.

Promptly arrests bleeding, either active or passive hemorrhages. Apply a thin layer of this cotton with gentle pressure to the surface of the bleeding wound. If desired, it can be easily removed a few minutes after application, although the healing process will be accelerated by leaving it on. It should be kept dry.

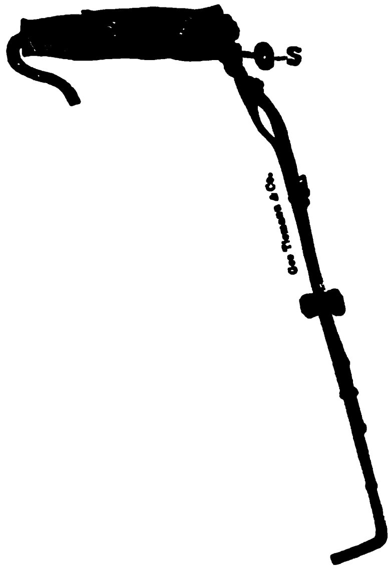
Fig. 144. Shaffer's Lateral Screw, for abducting or adducting the thigh in hip-joint disease.

Dr. Newton M. Shaffer says ("*Archives of Clinical Surgery*," June 15th, 1877): "I have devised what I have called a "lateral screw," which allows extension in *any* direction that is indicated, and which at the same time can be made to act, without removing the splint, as an *adductor* or an *abductor* of the limb, at the pleasure of the surgeon. It can be attached to Dr. Taylor's splint in the same manner as his "abduction screw."

No. 1.



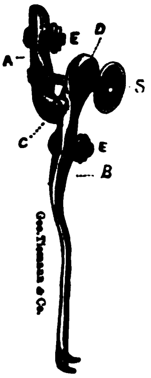
No. 2.



Nos. 1 and 2 represent the "lateral screw," as applied to one of Taylor's splints. 1 shows the shaft adducted,—2, abducted. By simply turning the screw at *S*, the shaft of the splint can be made stationary at any point between the extremes indicated in the engravings. By using the screw, when the splint is adjusted, the surgeon is enabled to gradually and very gently change the position of the limb at will.

The "lateral screw" (No. 3) consists of two parts, *A* and *B*, joined together by the lateral hinge, *C*. The part *A* is fastened to the pelvic band. The part *B* is attached to the shaft of the splint. Through the everted lip, *D*, there passes a screw, *S*, which operates through a button (which revolves on a horizontal axis) and which is fastened into another button (also revolving on a horizontal pivot) in the part *A*. By turning this screw we can either approximate the lip *D* toward the part *A* (producing *abduction*), or by reversing the screw we can separate *D* from *A*, and *adduct*. *E*, *E*, represent the screw bolts, by which the apparatus is attached to the hip band and shaft of the splint.

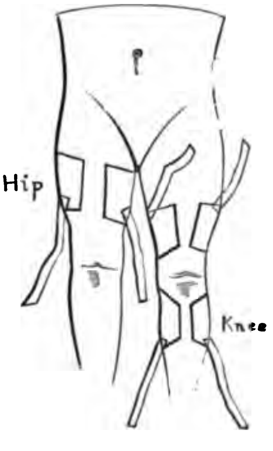
No. 3.

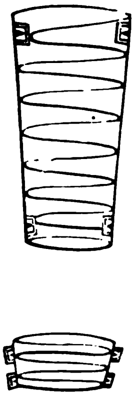


Before the splint is applied the screw should be turned as the circumstances indicate until the direction of the shaft of the splint corresponds with the position of the limb. After adjustment, extension is applied, in the "line of the deformity," and no attempt should be made to overcome the contraction by the use of the screw, for several days. It should then be used very gently. It is better to imitate the force of gravity, by which flexion is generally so readily overcome, and only "follow up" the contractions as they are modified by the extension, immobilization and the proper therapeutical adjuvants. If we use the screw to *abduct*, the ordinary perineal pads, which form the basis of the counter extension, will also be the point of resistance. When we use the screw to *adduct*, it will be necessary to supplement the *perineal* with *shoulder* straps, and to apply a little more extension than is required, so that as we use the "lateral screw," the extra force may be transferred to and lost upon the shoulders. Adequate extension and adduction are thus obtained. We should also secure the hip band firmly by the padded strap, which completes the circumference of the pelvis. In order to secure the shoulder straps in position, we cross them as they pass upward from the hip band to the shoulders on both the anterior and posterior walls of the thorax. It is also necessary to secure the pelvic band, so that its anterior half will form a slightly acute angle with the shaft. This may be done with webbing straps."

Fig. 145. Holthouse's Spiral Spring Extender for Joint Diseases.

Price, $10.00 to $15.00.

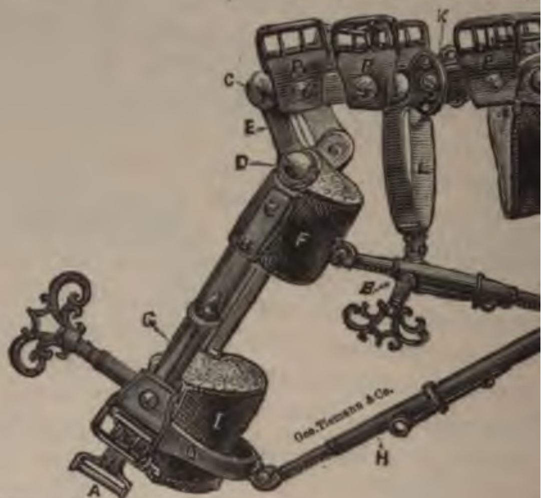




The apparatus consists of a spiral spring, covered with leather, flannel or linen, and having two buckles at one or both extremities. When extended, it forms a cylinder closed at the sides but open at each end; and when the coils of the spring are pressed together it approaches in form to a discoid ring or closed concertina, it need not, however, necessarily be cylindrical, but larger at one end than the other in conformity with the tapering shape of the limb. It can be made of any length, size or strength; and the traction-force exerted can be regulated with the utmost exactness.

Fig. 146. Shaffer's Knee

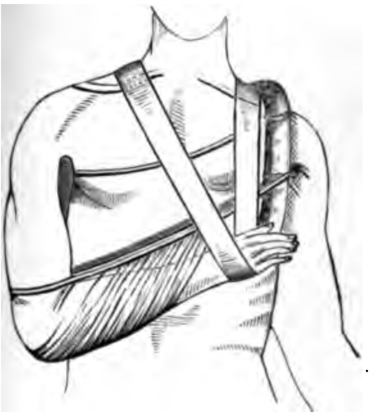
In the "*Archives of Clinical Surgery,*" for June
Shaffer remarks: "I have attempted to meet the patho
in knee-joint lesions with an apparatus which I devised
is to apply the desired force directly to the head of th



forward and downward by a simple movement. While
muscular contraction *in a direct line*, we relieve the joint
the deformity simultaneously. The apparatus is represent
engraving. It consists of three principal parts: the thigh
The first two are secured to the limb by adhesive plasters
the points *A*, *A*. Extension is made with a key at the ext
The joints, at *C* and *D*, move upon pivots, and as the ex
ratus are secured by their adhesive straps at *A*, *A*, the joint
downward, describing the arc of a circle, the radius of
Pressure is thus made directly upon the head of the tibia b
can be very greatly augmented by using the extension ro
relieves the joint of pressure by additional extension in
acquired by the preliminary extension of the rod *B*. *H* is an
properly an extension rod—which glides forwards as the e
B. As soon as the leg is thrown sufficiently forward, the a
secured by a slide, and an extra turn of the key at *B* and
from pressure, and with adequate extension applied direct
flexors. The thigh and leg bands at *H* and *I* move upo
adjust themselves readily to any position, and at *K* there is
which the curved bar *L* may be adjusted to suit the requirem
rod *B*. The bars *M* and *O* are secured to the thigh and
rivets. Through the buckles, at *P*, *P*, *P*, webbing straps (
producing counter extension in addition to that secured by me
straps."

Fig. 147. Fox's Apparatus for Fracture of the Clavicle.

Price, $ 5.00.



It consists of a padded ring with buckles attached, which fits over the sound shoulder; and of a wedge-shaped pad fitting the axilla of the injured side. On the top of this pad, pieces of webbing are fastened, one of which is to be passed anteriorly over the chest and buckled to the ring over the sound arm; the other over the posterior wall of the thorax, and fitted to the posterior portion of the ring, a sling, made of stout linen or other material, in length about two-thirds of the forearm, and in depth sufficient to cover it completely, is then applied to the elbow and secured tightly to the ring.

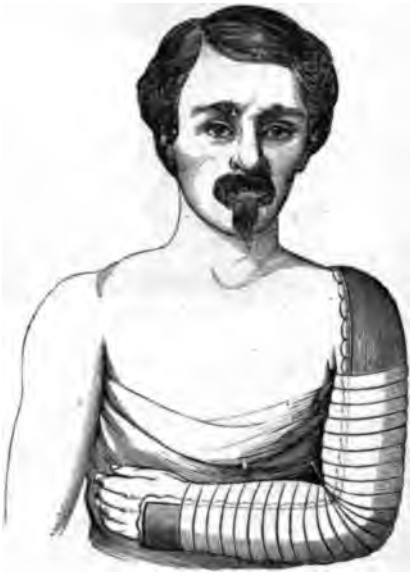
Fig. 148. Hamilton's Elbow Splint.

It is made of gutta-percha, moulded to fit the shoulder, arm, and forearm; must be well padded, placed upon the limb and secured by roller bandage.

The forearm should be placed at a right angle with the humerus, and maintained in this position by a right angled splint. The gutta percha splint, covered with a woolen or cotton sack, is first secured to the forearm by a roller; and then, in a case of fracture of the humerus above the condyles, while extension is made, the upper portion of the splint is secured to the arm in a simular manner. The front or bend of the elbow should always be well covered with cotton batting before enclosing the elbow-joint in the turns of the roller.

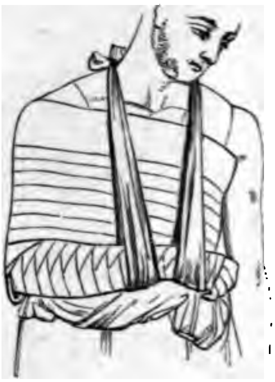
Price of Gutta Percha for Splinting:

thick, per pound,	$3.00
thin, " "	5.00
Roller Bandage, per pound	1.50



Dislocation Pulleys, (See Fig. 131), per pair, $ 7.00.

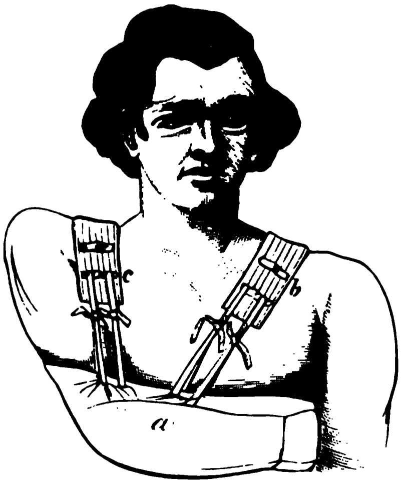
Fig. 149. Apparatus for Fracture of Surgical Neck of Humerus.



The fragments being reduced as well as possible, a single splint, made of leather, felt, or gutta percha, long enough to extend from the acromion process to the elbow joint, must be applied to the outside of the arm, enclosing about one half of the circumference of the limb. This should be moulded and allowed to become dry and hard before it is secured to the arm. A second short splint should be laid on the inside of the arm; both of these splints, having previously been covered with a sack of woollen cloth, are then to be made fast to the arm by a roller; and finally, the forearm being flexed upon the arm and suspended by a sling passing under the wrist, the arm must be secured to the side of the body by a separate roller. (Hamilton's Surgery).

Fig. 150. Mayor's Apparatus for Dislocated Clavicle.

The outer or acromial end of the clavicle is not unfrequently dislocated upwards and more rarely it is driven fairly over the acromion process, constituting a dislocation upwards and outwards. This dislocation is easily reduced, but the clavicle is with difficulty retained in place. The treatment consists in the application of a force over the top and outer end of the clavicle, with a counter-force applied below the elbow, so as to elevate the humerus and scapula, while the arm and forearm are confined by a sling and bandage against the side and front of the body. (Figs. c a).



These indications will be fulfilled by Mayor's apparatus.

Price of Mayor's apparatus for dislocated Clavicle, - - - - - $5.00
Gutta Percha for Splinting, per lb., - 3.00 5.00

EXTRA FINE HYPODERMIC POINTS.— Dr. Wm. A. Green writes in his "Practical Talk about Hypodermic Medicine:" I have recently had Tiemann & Co. to manufacture for me the most delicate and smallest point or needle that has ever been made, only a little larger than the proboscis of a fly, so delicate, in fact, that fluids thin as water barely pass through them, and that quite slowly. This in the hands of a physician of ordinary skill, can be passed through the coats of the skin into the cellular tissue positively, without pain. The smaller the point the less the pain. This delicate point, they have succeeded in making with exactness.

Fig. 151. Reduction of Dislocated Radius and Ulna.

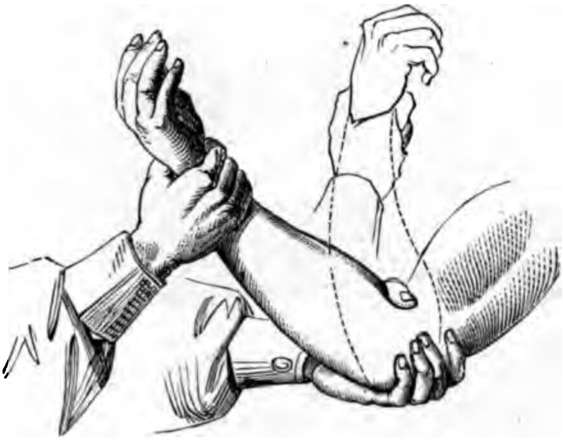


Fig. 152. Geo. Tiemann & Co.'s Improved Wire Arm Sling.

Price, $4.50.

With sliding extension splint for the hand, to facilitate passive motion of the wrist, without removing the support.

FIG. 152a.

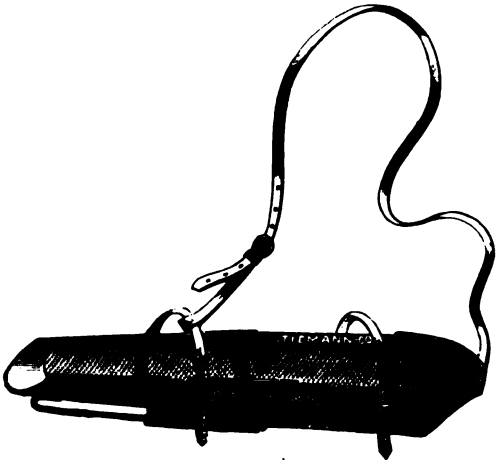
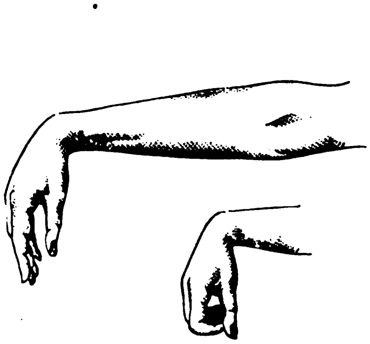


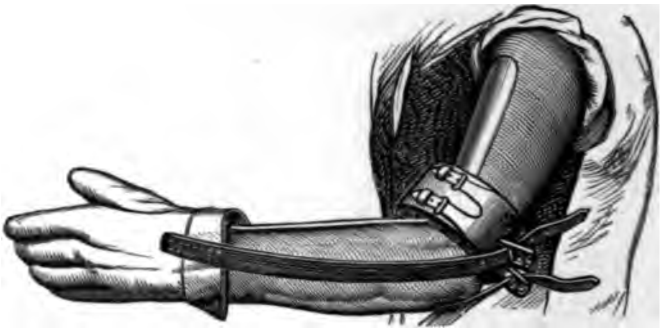
FIG. 152b.



Roller Bandage, per pound, - - - - - - - -	$1.50
Adhesive Plaster, per yard, - - - - - - -	.75
Strong Adhesive Plaster, on twilled goods, per yard, - - -	1.50

Fig. 153. Clark's Apparatus for Fracture of the Olecranon.

Price, $5.00 to $8.00.



Clark's apparatus consists of a band of ordinary sole leather, about two inches in width, and of sufficient length to surround the arm, lined with cloth or chamois and well padded with hair or cotton. In order to give the band additional firmness, and also to secure it around the arm, a strip of harness leather is stitched upon the outside, to one end of which two small buckles are attached, while the other end, which extends about three inches beyond the band, is split or cut in two straps to correspond with, and fasten into the buckles. The band is fastened around the arm above the fractured process, and may be drawn to any degree of tightness necessary to bring the broken fragment down, when traction is made.

Fig. 154. Smith's Anterior Suspending Splint in the Treatment of Fractures of the Lower Extremity.

By Charles Shrimpton, M. D., Paris.

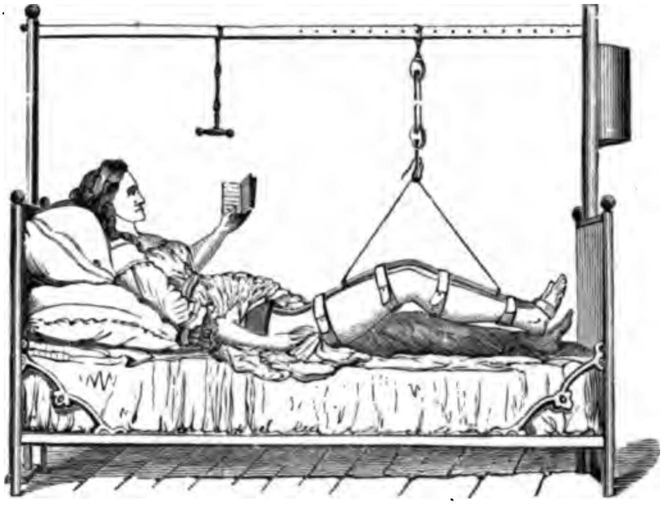
Price, $3.00.

The apparatus is of itself extremely simple: a splint made of two parallel wires of sufficient length to extend from above the anterior superior spinous process of the ilium to beyond the extremity of the toes, a suspending cord, some wadding, and some bandages. The suspending cord is formed of two parts, one to hang perpendicularly from its support, the other with a hook at each end, to be attached to the sliding bars of the splint. This part of the cord passes through a pulley, which is hooked to the extremity of the perpendicular cord. The perpendicular cord is double, with a block in the middle, so that the limb may be raised or lowered by lengthening or shortening the cord at will. The wadding to be placed on the surface of the limb before the splint is applied. A double stout band to pass around the pelvis, and fix the upper part of the splint. Five short pieces of band, one to pass around the foot and the splint, two in the same way around the leg, and two around the thigh to keep the splint in place whilst it is being adjusted. Several strong rollers to be applied to the whole length of the limb to replace the short bands, which are to be withdrawn as the roller is applied.

The cut represents the splint *in situ* before the roller-bands are applied. The limb is supported by the temporary short bands. The wadding has been withdrawn to show that the wires cease to touch the limb as soon as it is suspended.

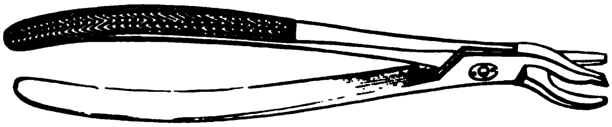
Very little remains to be said in describing the mode of application of the splint. The fractured limb should be left, as it may then be, until the splint has been adapted to the *sound* limb, in order to take its exact length, bends, &c. The suspending cord being now fixed, and the splint prepared with a bend corresponding to the groin of the fractured limb, we may proceed to suspend the limb. The large double thick band is to be attached to the upper part of the extremity of the splint and passed firmly round the pelvis. The wadding is to be placed on the front part of the fractured limb to receive the splint, and the short bands are now to be tied *lightly* round the foot, leg, and thigh. This done, the limb can at once be suspended by the cord without any attempt at reduction, and the reduction will take place almost of itself by the mere weight of the limb. As soon as the splint is perfectly adjusted *parallel to the axis of the limb* the rollers may be *lightly* applied, leaving any part requiring dressing free from every kind of bandage. The wounds may thus be attended to without interfering in any way with the rest of the apparatus. Extension and counter-extension are necessary only to bring the limb to the length of the splint whilst the rollers are being applied.

FIG. 154.



Price of Adhesive Plaster,	per yard $ .75
Price of Moleskin Adhesive Plaster, (spread on twilled goods)	per yard $1.50
Price of Roller Bandage,	per pound, $1.50

Fig. 155. Shrimpton's Forceps,

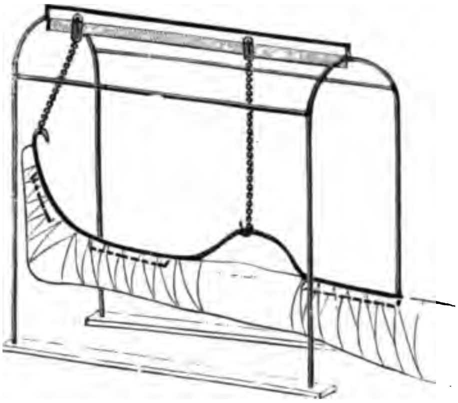


For bending Smith's Anterior Splint while *in situ*, to adapt it to the limb.

Price, $ 3.00.

Fig. 156. Salt's Cradle or Swing.

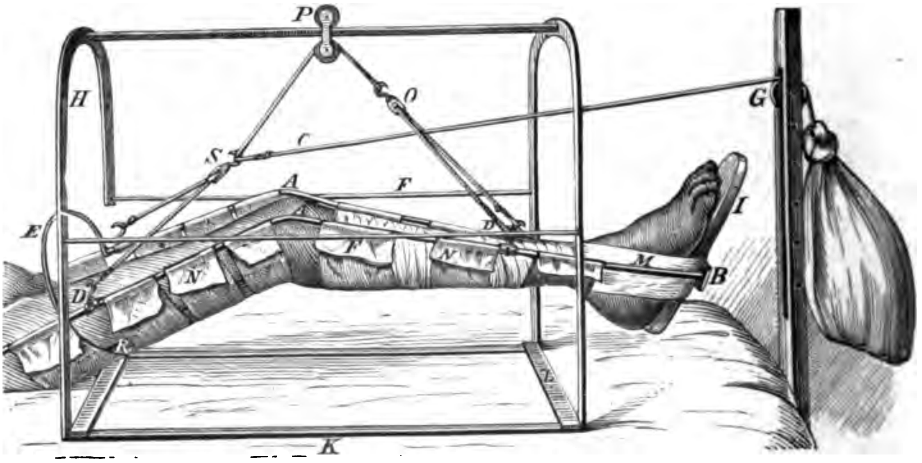
Price, $ 20.00.



For protecting a fractured limb from the pressure of the bed-clothes, and to permit change of position without the risk of displacing the bones. It is a frame resting upon the bed and having on its central bar a small railway, upon which travels two pulleys, suspending by a chain the wounded limb (placed in such splinting as the surgeon may select) and protecting it from all external pressure.

Fig. 157. Clark's Splint.

Price, $ 30.00.



The attachment for extension is by means of adhesive strips (*m*) extending to near the knee and passing around a foot-piece (*i*) to which is attached a small bracket (*b*) which hooks over the lower end of the main splint. Then the limb is suspended by four hooks (*dd*) which are attached to thimbles that slide back and forth upon the bar, and are fixed at the desired point by means of thumb-screws in their outer sides. Extension is made by means of the cord (*c*), attached to the hook in the pulley at (*s*), passing forward between the cords playing over the pulley at (*o*), to drop over the pulley (*g*), fixed in a post at the foot of the bed, and then attached to a sand-bag of sufficient weight to make the necessary amount of extension. The weight ordinarily required for an adult is from ten to fifteen pounds. A uniform traction is exerted upon the limb, in whatever position the body of the patient may be placed.

Fig. 158, 159. Morgan's Fracture Bed.

FIG. 158.

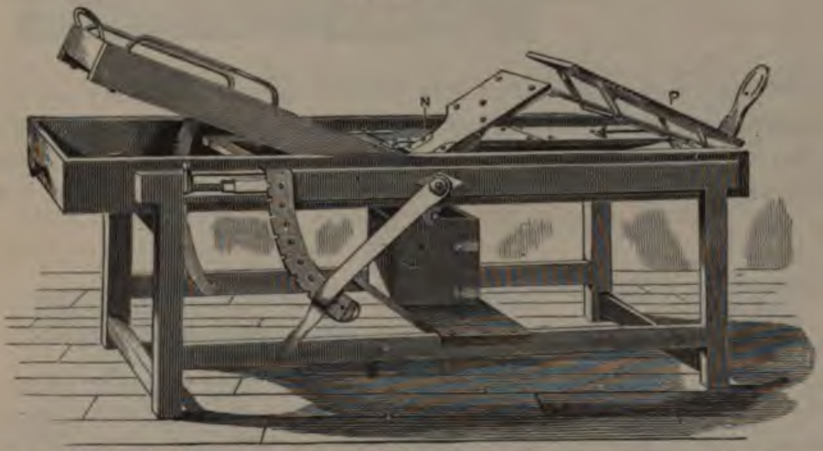
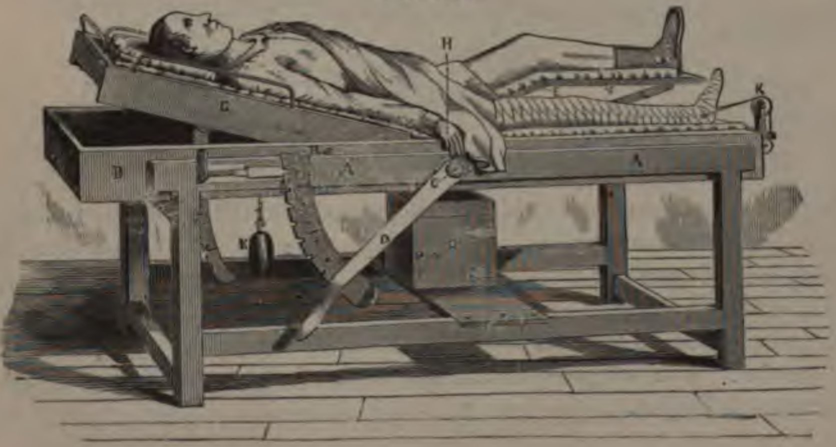


Fig. 159. Represents the bed and a patient with fracture of the neck of the femur,

FIG. 159.

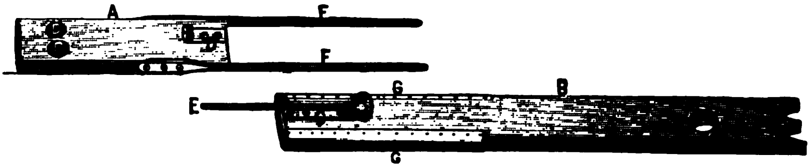


the thigh resting upon a plane, and extension effected by weight and pulleys, while the sound thigh rests upon an inclined plane for the purpose of counter-extension. While the fractured thigh remains in a horizontal position, the other is elevated and the leg raised above and on a line corresponding to the axis of the body. In this position the pelvis becomes fixed and counter-extension is maintained by the position of the sound thigh.

Fig. 160, 161. Munger's Splint.

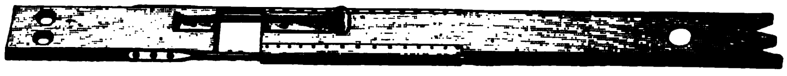
Price for the Set of Screws and Rods, $ 4.50.
Price for Apparatus, complete, $ 6.00.

Fig. 160.

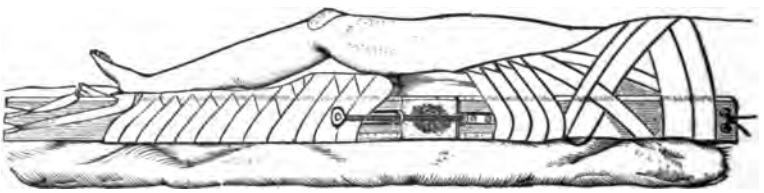


F F, Iron Rods three-eighths of an inch in diameter and a foot or more in length, are fitted to the upper or body portion of the splint, these rods slide into grooves G G in the lower section B which are covered with tin to prevent displacement of the bandages. At the upper end of the lower segment, is attached an iron brace

Fig. 161.

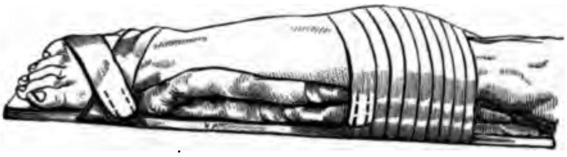


G through the head of which runs a screw E, ten or twelve inches in length. The end of this screw strikes against a corresponding brace D attached to the upper segment, and it is by turning this screw that the two portions of the splint are forced apart. By this means extension is made and kept up to any desired degree.



Application.—Each section should be well padded, and the whole then applied to the limb in the same manner as Liston's splint, with rollers and perineal band. except the space between the sections, which is not to be covered by the roller, but with a light dressing separate from the rest. By this means the wound may be examined and cleaned as often as necessary without disturbing any other portion of the apparatus. The surgeon, with a few turns of the screw, easily forces the limb to its natural length.

Fig. 162. Depuytren's Splint for Fractured Fibula.

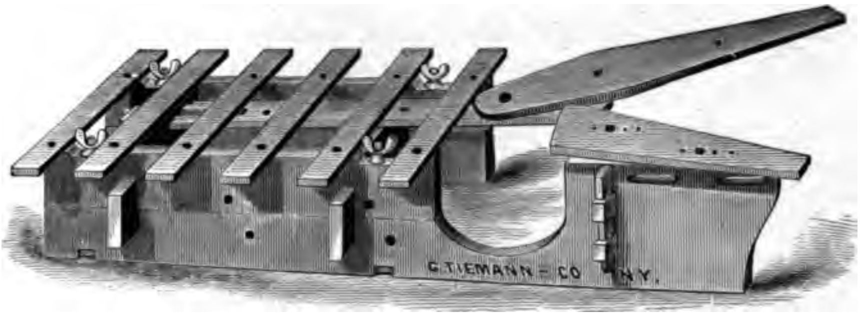


Depuytren's Splint is constructed of a single board, about four inches wide, and must extend from the condyle of the femur to two or three inches beyond the foot. Upon this a long triangular pad must be laid, the thickest portion of the triangle corresponding to a point about an inch above the internal maleolus. The bone is then set, and the splint, with the pad resting upon it, lying along the inside of the leg, which is secured by roller bandage. The bandage not covering the site of the fracture.

Fig. 163. Apparatus for Supporting the Patient while Applying Plaster-of-Paris in the Treatment of Fractured Femur.

By P. A. HARRIS, M. D., Dover, New Jersey.

(Extracted from *The Medical Record, New York, Sept.* 18, 1875.)


G. TIEMANN & CO N.Y.

The accompanying illustration represents the apparatus. It is over five feet long, two feet wide, and ten inches high. It consists of a long and short side, each being made up of two boards of equal width, placed one on the other edgewise, and held together by two bolts provided with thumb screws, which also serve to fasten the tenons of the two cross blocks, thus connecting the sides together; of six slats forming the body-rest, placed across and secured at either end by a screw; of a third cross-block, very short, which serves to support the rest on which the sound leg is placed. This short cross-block has two tenons, which pass through mortises in the long side, and are held in place by a wooden pin.

The sound leg-rest is secured to the long side by a screw, and to the short cross-block in like manner. It is provided with a series of holes to adapt it to the length of the patient. The half circle-like opening in the long side, between the sound leg-rest and the body-rest, corresponds to that portion of the body around which the dressing must be carried to form the girdle. This opening is ten inches long, its maximum depth being six and one-half inches.

A very short perineal band attached to two broad straps of thin leather will furnish counter-extension. Secure one end to a slat near the head of the apparatus, let it pass down over the slats forming the body-rest, between the thighs, up over the body and shoulders, and fastened again to one of the slats near the head. A part of the apparatus which remains to be described is the folding-rest for supporting the injured leg until ready for operation. It consists of two boards, one much thinner than the other, held together by a screw which allows the part forming the leg-rest to be abducted to any extent from the sound limb. When removed from its place, as it will be while the plaster-dressing is being applied, it can be folded together: hence named folding-rest. At the end of the under thicker portion of the folding-rest is a tenon which is made to pass between the slats forming the body-rest, and the upper edge of the first cross-block; it is provided with a spring which prevents it from being pushed out of the mortise. The folding-rest is valuable, particularly as a support for the injured limb during the administration of an anæsthetic. If the limb be firmly bandaged to it, it will prevent, to a large extent, the injury so often done to the soft parts by the violent, uncontrollable, muscular efforts so common in the beginning of anæsthesia.

The apparatus is so constructed that it can be quickly set for either leg, or changed from one to the other.

To change it from left to right, or *vice versa*, unscrew the four thumb-screws, remove the bolts, and change the under half of side supports each for the other. Insert the four bolts, and tighten the thumb-screws. Then remove the two screws which secure the sound-leg-rest, and withdraw the pin from the tenons at the end of short cross-block. Remove short cross-block, insert from the opposite side, and secure it with pin. Turn the sound leg-rest the other side up, and fasten by the two screws as before. When this is done, the folding-rest can be introduced as before; in fact, every part of the apparatus remains the same, except it has been changed from left to right, or *vice versa*. To render it more portable I have constructed it so that by removing the four bolts it can be folded together and made to occupy about one-third the space.

Three minutes will suffice to set up the apparatus, or change it from side to side.

Directions.—Before placing the patient on the apparatus, let the body-rest be covered with several folds of a blanket or coverlet, and provided with a pillow. The leg-rest should also be padded by doubling a small blanket over it. Let one end of the strap attached to the perineal band be buckled on the first slat at the head of the body-rest, and carried down over the centre of the rest. Place the patient on the apparatus so that part of the body and pelvis, around which the bandage must be carried, will correspond to the vacant space between the leg and body-rest. Continue the counter-extending band over the perineum and abdomen, and secure its straps to the slat at the head of the apparatus. Secure the sound leg to its rest by a few turns of a roller passed round the leg, under the rest, and through the slats near the upper edge of the long side. The patient's body and sound leg are now supported on a common plane several inches above the bed or table on which the apparatus rests. Every part to which the dressing should be applied is accessible to the hand of the operator. The sound leg-rest may be abducted to any distance compatible with a successful appliance of the bandage. The injured leg, of course, must be supported by an assistant, aided perhaps by the compound pulleys so often required for extension. Abduction to much extent causes the girdle to fit poorly. When the dressing is hard enough to warrant us in discontinuing the extension, the straps attached to the perineal band may be drawn out from under the girdle, the bandage removed from the sound leg, and the patient transferred to the bed.

Extracted from the NEW YORK MEDICAL JOURNAL, Oct. 1874.

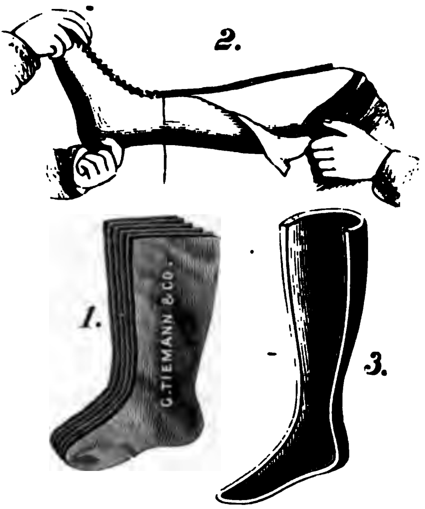
A New Method of applying Plaster of Paris for Fracture of the Bones of the Leg. By G. WACKERHAGEN, M. D., Surgeon to the Southern Dispensary of Brooklyn.

As I have experienced considerable difficulty in removing plaster-of-paris dressings when applied by the roller bandage, and especially when obliged to remove them on account of pain caused by an increase of the swelling, I respectfully submit to the profession a method of application by which these disadvantages may be avoided.

Having procured a woollen or cotton stocking sufficiently long to reach to the knee-joint, I cut from it, as a pattern, six layers of coarse red flannel (1), (one-quarter of an inch larger to allow for shrinkage). The flannel is then soaked in water, pressed, and laid over the back of a chair ready for use. A one-quarter-inch cotton rope is now sewed to the posterior median line of the stocking. The plaster of paris being in process of preparation, the stocking is cut in the anterior median line, applied to the fractured limb, and laced up in front, including the rope (2), extension and counter-extension being kept up by assistants, and the fracture adjusted.

Each layer of the flannel is now separately saturated in the plaster paste, and applied, three layers to each side of the limb, being careful to avoid covering the rope. After this is done, a layer of plaster paste is applied to the flannel, and, when this has become sufficiently dry, a coating of shellac varnish is applied, which produces an elegant finish, and also gives firmness to the splints. The varnish will dry in about fifteen minutes.

FIG. 164.



This dressing can be removed in from three to five minutes by loosening the rope from the plaster and cutting the thread which binds it to the stocking. The rope having been removed, the plain stocking surface can be cut through with an ordinary pair of scissors. The splint is then removed in two lateral portions, each half of the stocking remaining attached to its corresponding splint (3).

Extracted from the NEW YORK MEDICAL JOURNAL, Sept. 1875.

An Improved Method of obtaining Support for Fractured Bones of the Extremities, with Flannel, Plaster of Paris, and Shellac. By G. WAGERHAGEN, M. D., Surgeon to the Southern Dispensary of Brooklyn.

In the treatment of fractures of the long bones the surgeon is required to exercise great care and diligence, for the reason that patients generally expect to be dismissed with the limb perfect in contour, and as useful as before the injury.

Every possible effort should be made to comply with these demands; therefore, it is essential that he be prepared to employ material which will supply the following requisites, viz.:

It should be lightly, easily and quickly applied and removed. It should readily adapt itself to the irregularities of the limb, and become sufficiently firm to retain the fractured bones in place as soon as extension and counter-extension are discontinued. It should not confine perspiration, nor become unserviceable from increased temperature or moisture.

In order to allay pain, and to faciliate a more complete adjustment of the fracture, I am of the opinion that anæsthetics should be more generally administered, thus preventing deformity which sometimes results because of the difficulty in overcoming spasmodic action of the muscles.

During the past ten months I have practically tested nearly all the materials that have been employed for dressing fractures, and have found them more or less defective, excepting plaster of Paris for the application of which I propose the following improved method:

After replacing the fragments as accurately as possible (extension being maintained by assistants) the limb is smoothly bandaged with cotton-wadding, prepared in the form of an ordinary roller; a flannel bandage spread with dry plaster of Paris, and rolled, is now soaked in warm water (to which I generally add about two fluid-ounces of saturated solution of sulphate of potassium), and applied to the limb, over the wadding, by circular and reversed turns. One layer of the flannel applied in this way is amply sufficient for support.

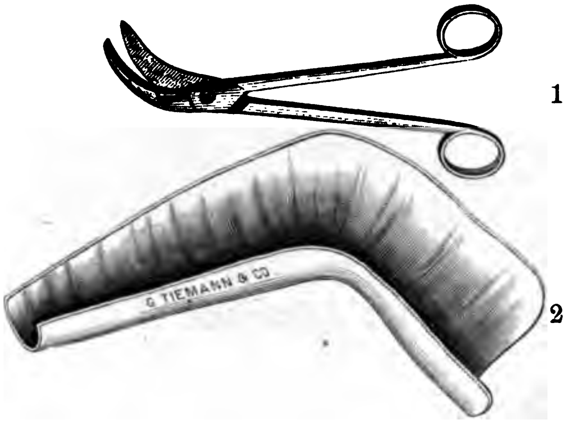
When we wish to inspect the point of fracture, the dressing, which is only about an eight of an inch thick, is easily cut through by a pair of curved scissors (1), manufactured for me by Messrs. Tiemann & Co. (Fig. 165.)

If it is desired to employ lateral splints, the dressing should be cut in the median line of the anterior and posterior surfaces. If anterio-posterior support is preferred, it should be cut through the lateral surfaces. The splints should now be varnished on their inner and outer surfaces with shellac, or this preparation may be applied to the outer surface before removal.

The shellac seems to permeate the dressing sufficiently to increase the strength of the splint, and at the same time renders it slightly flexible instead of brittle, as is the case when plaster of Paris is used alone.

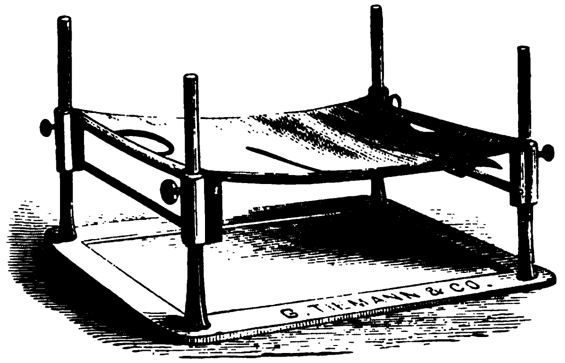
Fig. 165. Wackerhagen's Plaster Paris Shears.

Price, $ 6.00.



The lateral elbow splint (2), weighs only four ounces, the materials necessary for use by this method can be procured in packages from Messrs. Tiemann & Co., New York.

Fig. 166. Wackerhagen's Apparatus for Fixing the Pelvis in Inflammation of the Hip-Joint.


G. TIEMANN & CO.

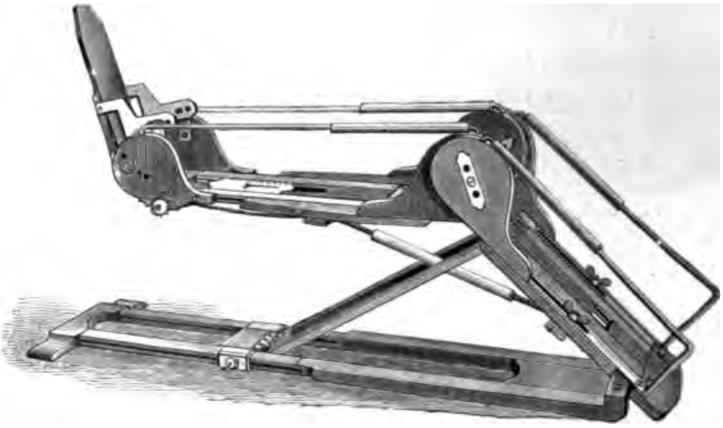
In order to overcome some of the difficulties in the management of inflammation at the hip-joint, I have had an apparatus constructed by which I can keep the pelvis and affected joint fixed, and in position, and also apply counter-extension without producing excoriation of the integument at the groin.

The bed represented in Fig. 166 is made of iron and constructed for a child six years of age. It consists of a frame base, measuring twelve inches in its anterio-posterior diameter and seventeen inches transversely—four iron rods are fastened perpendicularly to each corner. The surface on which the pelvis is fixed is of leather, and is arranged to slide up or down on the perpendicular rods, and may be fastened by the screws. Anteriorly, the leather is slit up about five inches, and the under surface is supplied with straps and buckles. By this contrivance the aloine evacuations may be passed without soiling the apparatus. The leather surface having been padded with cotton; the pelvis and affected joint are firmly bandaged thereto. Extension is made by weight and pulley after Dr. Buck's method.

ACTUAL CAUTERISATION WITH CHARCOAL PENCILS.—Pencils may be made of charcoal, nitrate of potash, and a little gum tragacanth, which light and burn like a cigar, and are very useful as an actual cautery. A mass should be made and rolled into cylinders about four inches in length, and of the diameter of a common pencil. (M. Bretonneau).

Fig. 167. Rhodes Fracture Apparatus, or Double-Inclined Plane.

(Principles Covered by his Patent of Jan'y 6, 1874.)



DISTINCTIVE FEATURES—1st, Adjustibility as to size as well as to form. 2d, Correct position and action of knee and ankle joiuts. 3d, The novel application of the Spring power and Extension, &c.

Fig. 168, 169. Rhodes' Fracture Bed.

(Patented Jan'y 6, 1874.)

DISTINCTIVE FEATURES—1st, Adjustability from chair to bed, or any desirable position of limb or body; also, the same apparatus fitting all normal adult persons. 2d, Concentric Action of Joint, with those of Patients, thereby allowing free joint action without displacement, in case of fractures, &c., &c.

FIG. 168.

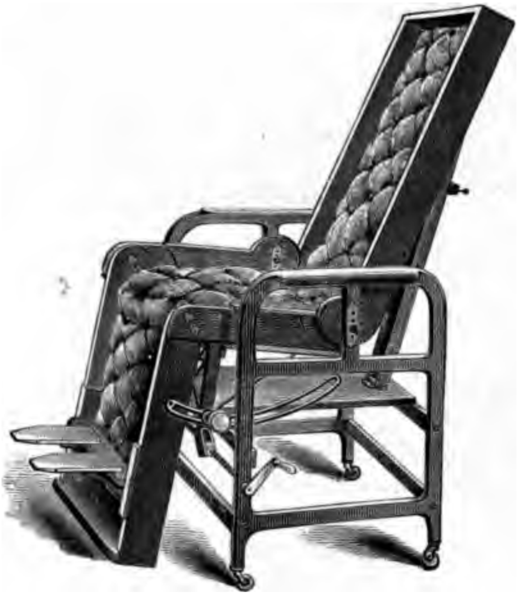
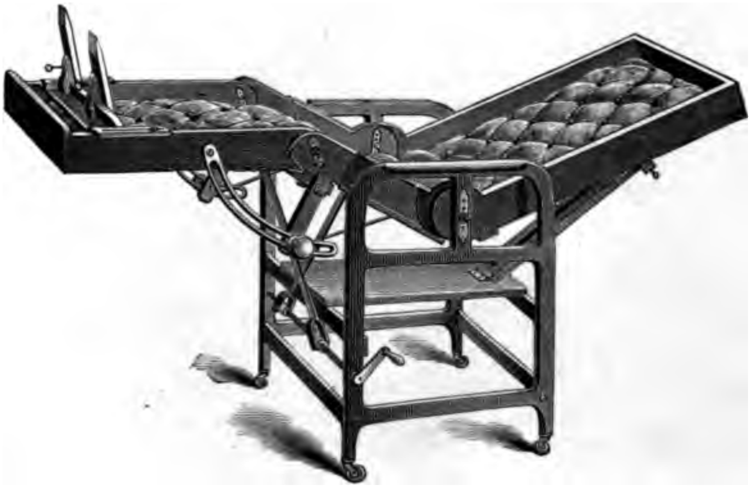


FIG. 169.



See Operating Tables and Chairs, page 123, Part I.

Anæsthetic Apparatus, page 114, Part I.

Antiseptic Surgery Apparatus, page 119, Part I

TO REMOVE A RING FROM SWOLLEN FINGER.

Wind a reel of cotton evenly around, beginning at the extremity of the finger, and bringing each coil into close apposition with the preceding, until the ring is reached: having then threaded a needle with the cotton, and passed it under the ring, carefully unwind the thread from the finger, the ring follows each coil as it is successively unrolled, and by almost imperceptible degrees is brought over the knuckle and removed.

SURGICAL USE OF LIQUID GLASS.

This is a silicate of potash, which is soluble in hot water, but insoluble in cold. The solution is applied by means of a brush over the ordinary bandages. The advantages which this application is said to possess are the following: 1. It is simple, and easy of application. 2. It dries and hardens rapidly, requiring for this purpose only five or six hours. Desiccation may be favoured by using a solution evaporated to the consistence of a syrup. 3. It is very solid and impermeable. 4. It is readily removable by means of hot water. 5. It is very economical. Before putting on the bandages, a layer of liquid glass may be applied over the limb.

Extracted from the American Journal of the Medical Sciences, Philadelphia.

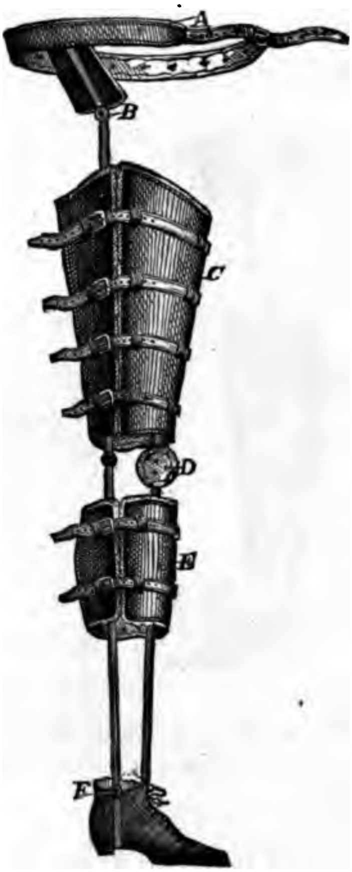
Dr. Henry M. Smith's Instruments for the Treatment of Ununited Fracture by Pressure and Motion.

Since 1862 I have frequently heard from cutlers of orders given for the apparatus, but have been unable to obtain a satisfactory report of the treatment from surgeons ordering it. Sufficient evidence has, however, been presented to show that the results of treatment by "Pressure and Motion" should not be forgotten, nor its advantages overlooked by the profession.

Experience having led to some slight modifications of the original apparatus, and many of the cutlers having failed to manufacture it as described by me, often spoiling it in attempts to modify it to their taste, I here offer drawings clearly showing the forms now applied to the femur, tibia, and humerus, in all of which it has been successfully employed.

In the manufacture of all these limbs the cutler should use for the side bars that are the main support, "cast steel" ½ inch wide and ⅛ inch thick, which is strong enough to sustain any ordinary weight. For the back and front splints that surround the limb, and act as a ferule at the seat of fracture, take galvanized sheet iron, No. 6, stuffed with wool, covered by buckskin on the inside of the splint and morocco on the outside. The attempts of some cutlers to make lighter limbs by using stiff leather and steel half rings, has not proved advantageous.

Fig. 170.
Smith's Artificial Limb for Ununited Fracture of the Femur.



Price $50 to $75.

A, Pelvic band. *B*, Hip-joint. *C*, Conical thigh piece which supports the weight of the body, and makes pressure on the fractured ends of the bone, permitting sufficient friction to excite periosteal action. *D*, Knee-joint in side irons. *E*, Support at calf. *F*, Laced shoe and ankle-joint,

DIRECTIONS FOR MEASUREMENT.

1. Patient's name.
2. Smith's Artificial Limb for ununited fracture of the femur.
3. Right or left side.
4. Position of false joint. *Inches*
5. Length from sole to ankle, . "
6. Length from sole to knee . . "
7. Length from sole to crutch (perineum), "
8. Length from sole to trochanter major, "
9. Length from sole to iliac crest, . "
10. Circumference above iliac crest, "
11. Circumference of thigh close to groin, "
12. Circumference of middle of thigh, "
13. Circumference of middle of knee-joint, "
14. Circumference around the tubercle of tibia, "
15. Circumference of middle of calf, . . . "
16. Circumference of ankle, ... "

Patient will send us a shoe.

If we are to furnish shoes the following additional measures are required:

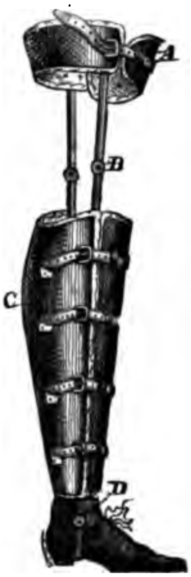
a Length of sole of the foot, ... "
b Circumference of ball of foot, ... "
c Circumference of instep, ... "

☞ Shoes are charged extra, according to quality.

Price of Adhesive Plaster, per yard, - - - - - -	$ .75
" " Moleskin " on twilled goods, per yard, - - -	1.50
" " Roller Bandage, per lb., - - - - -	1.50

Fig. 171.
Smith's Artificial Limb for Ununited Fracture of the Tibia.

A. Support at middle of thigh. *B*. Knee-joint in side irons. *C*. Main support of the body by accurate adjustment below the tubercle of the tibia. *D*. Ankle-joint and boot.



DIRECTIONS FOR MEASUREMENT :

1. Patient's name.
2. Smith's artificial limb for ununited fracture of the tibia.
3. Right or left side.
4. Position of false joint. *Inches.*
5. Length from sole to ankle-joint, . . "
6. Length from sole to knee-joint, . . "
7. Length from sole to middle of thigh, . "
8. Circumference around ankle-joint, . . "
9. Circumference below calf, . . . "
10. Circumference around middle of calf, . . "
11. Circumference around tubercle of tibia, . "
12. Circumference around middle of knee-joint, . "
13. Circumference around thigh above knee, . "

Price $30. to $40.

Patient will send a shoe.

If we are to furnish shoes, the following additional measures are required:

a Length of sole of foot, *b* Circumference of ball of foot,
c Circumference of instep, *d* Circumference above ankle

The heel depends on the shortening from the fracture.

In every application of the apparatus let it be remembered, 1st, that the pressure at the seat of fracture must be as great as can be borne without inflaming the skin; hence the strap at this point must always be firmly drawn so as to make the apparatus also act as a ferule around the ends of the fragments.

2d. That in the lower extremities, the weight of the body is sustained by the upper part of the hollow splint, just as a stump is sustained in an artificial limb after amputation. The upper strap should, therefore, be firmly drawn when the patient is about to walk. but it should be slackened, so as to be more comfortable, when the patient is in bed or sitting up in a chair.

3d. When worn for several months the inside lining and stuffing should be renewed, so as to give accurate support.

4th. When from union occuring it is proposed to lay aside the splint, let it be taken off at night for ten days, or whilst sitting up in a chair, before any attempt is made to walk without it.

5th. It is useful in recent fractures, enabling the patient sooner to sit up.

☞ Shoes are charged extra, according to quality

Fig. 172.

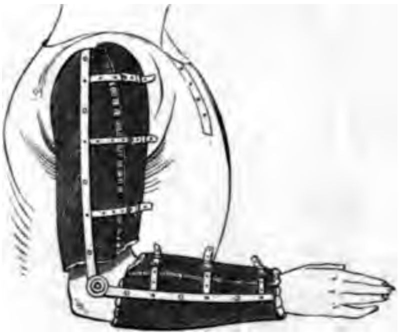
Smith's Artificial Limb for Ununited Fracture of the Humerus.

Price $35. to $70.00, according to finish, &c.

Fitting close over the rotundity of the shoulder and forearm, accurately jointed at the elbow.

DIRECTIONS FOR MEASUREMENT.

1. Patient's name.
2. Smith's artificial limb for fracture of the humerus.
3. Right or left side.
4. Length from acromion to point of external condyle.
5. Length from condyle to styloid of radius.
6. Length from internal condyle to styloid of ulna.
7. Circumference from point of shoulder to opposite axilla.
8. Circumference around top of shoulder over deltoid.
9. Circumference around middle of arm.
10. Circumference at elbow-joint.
11. Circumference at upper end of forearm.
12. Circumference at middle of forearm.
13. Circumference at wrist.



Be careful to take circumference at wrist, whilst the radius and ulna are parallel or between pronation and supination.

Fig. 173.

Smith's Artificial Limb for Ununited Fracture of the Forearm.

Price, $ 35.00 to $ 60.00, according to finish, etc.

A. Piece accurately embracing the arm. *B*. Joint for flexion and extension of forearm at elbow. *B*. Pivot-joint permitting rotation of head of radius in semi-pronation and supination. *C*. Ensheathing piece for forearm. *D*. A thick pad to press on styloid processes of ulna and radius at their carpal surfaces—so as to preserve the parallelism of these bones.

DIRECTIONS FOR MEASUREMENTS:

1. Patient's name.
2. Smith's artificial limb for ununited fracture of the forearm.
3. Right or left side
4. Length from middle of humerus to external condyle.

5. Length from condyle to styloid of radius.
6. Length from internal condyle to styloid of ulna.
7. Circumference around middle of arm.
8. Circumference at elbow-joint.
9. Circumference at upper end of forearm.
10. Circumference at middle of forearm.
11. Circumference at wrist.

Fig. 173.

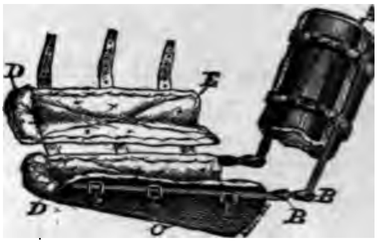
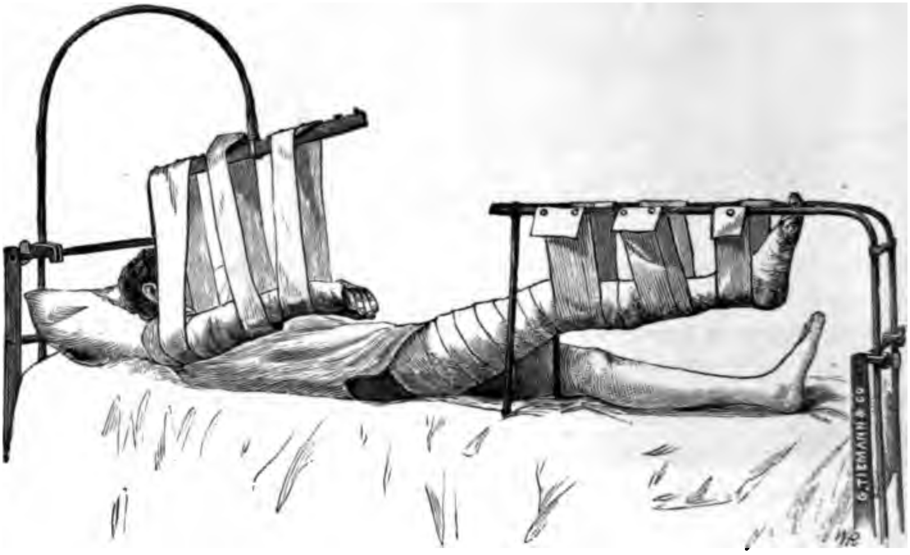


Fig. 174. Buck's Suspension Apparatus for Hospital Use.

Price, $18.

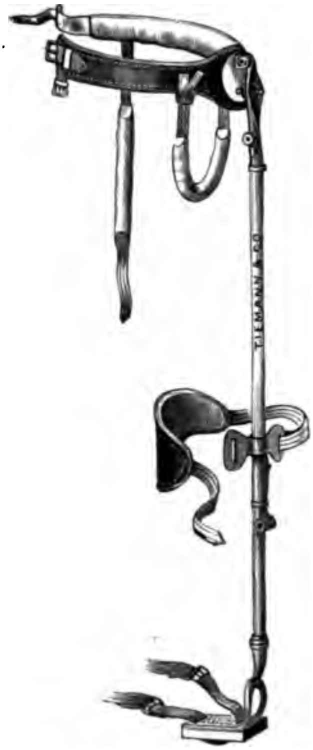


No. 1. For suspending the lower limbs is made of five-eight inch iron tubing bent in the manner shown by the picture. The horizontal portion overhanging the bed is supported by two upright iron rods resting upon the mattress astraddle of the thigh. A row of screw heads inserted along the outer surface of the horizontal portion serves for fastening the ends of the canvas bands that suspend the limb. The upright portion of the apparatus is securely fastened to the two cross-rods at the foot of the bedstead by clamps and can be adjusted at any required height. The suspending bands are of stout sailcloth canvas, cut of any required length and width, and buttoned on to the screw heads by slits cut for the purpose. The canvas being ver strong does not tear, and will sustain any weight it has to bear.

No. 2. For suspending the upper limbs, is made of the same sort of iron tubing its upright portion is fastened by clamps at the head of the bedstead and its lowe portion overhangs the bed and holds suspended at its extremity a flattened strip o hard wood on the upper edge of which a row of screw heads serves for fastenin the ends of the canvas bands that suspend the limb. The strip of wood that support the limb plays horizontally on a swivel joint at the extremity of the iron tubing.

Fig. 175. Sayre's Long Splint for Hip-Joint Disease.

Price, $25.00 to $45.00, according to size and finish.



The pelvic band, perineal straps, knee cap, foot-piece, and contrivance for extension of this instrument correspond with analogous parts of Dr. Taylor's long splint. The modification consists in the addition of an endless screw, by which rotation is produced. Dr. Sayre describes it as follows.

The long bar, reaching from the pelvis to the bottom of the foot, is hollow. Another bar, running inside of it, is furnished with a rack, by which, and a key, we make extension. It is locked in the same way as the short splint. The cross-bar at the bottom of the instrument is covered with leather, to keep from making noise on the pavement while walking. The ends of a strong leather strap are passed through slits in the footpiece for the purpose of buckling to adhesive strips upon the leg.

APPLICATION OF THE SPLINT.

Take two strips of strong moleskin adhesive plaster from two to four inches in width, according to the size of the patient and the entire length of the limb, divide the upper extremity of the plaster into strips, two or three inches long, and sew strong webbing with buckles attached on below. These plasters are then applied on either side of the leg in such a manner, as to leave the buckles a little above the ankle-joint, and are secured by a snugly adjusted roller, so applied as to leave the tags with the buckles hanging loose, the roller being carried up over the knee, and as far up the thigh as can be done with convenience, the upper split-ends of the plasters are reversed and braided in with the roller as it turns down the thigh, securing it smoothly. The stocking is then pulled up on the foot, holes having been cut on either side for the buckles to pass through, and the shoe applied, with holes cut through in the same manner.

The instrument is now placed on the outer side of the leg, and the cross-bar at the bottom brought in front of the heel of the shoe, and securely buckled to the tags above described.

The Pelvic-band is next brought around the hips, and secured by the buckle upon the opposite side, and the perineal straps attached as firmly as need be.

The knee-pad-band is then slipped up or down, until it is made to rest opposite the knee, when it is passed around and buckled fast.

Extension is now made by the key upon the ratchet until full compression is borne without pain. The abducting screw may then be used, and daily increased.

If the limb be strongly flexed, an additional strap is applied at the posterior part of the instrument at the knee, running up the back of the thigh, and secured to the posterior portion of the pelvic band, and made tighter as occasion may require for the purpose of extending the limb. This latter strap should be elastic for the purpose of keeping up a constant tractile force; and, at the same time, allow of flexion when the patient wishes to sit down.

By this means, many cases that have gone to the third stage of the disease, may, in the course of time, recover without exsection, with tolerably good form and a moderate degree of motion, without any further operative procedure.

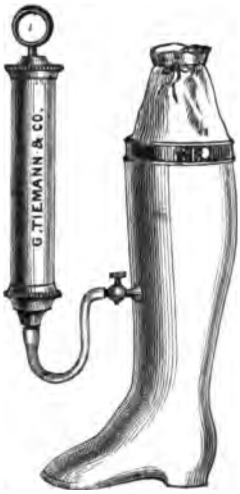
Directions for Measurement.

1. Sayres' Long Hip-joint Splint.
2. Name of patient.
3. Age of patient.
4. Weight of patient.
5. Right or left leg. *Inches.*
6. Length from sole to crest of ilium, ... "
7. Circumference of pelvis at iliac crests, . . . "

Dry Cupping.

Fig. 176. Junod's Boot.

Price of Boot with Pump $15.00 to $25.00, according to size and finish.



Dry Cupping was suggested about twenty-five years ago by Junod, of Paris, for the relief of rheumatic pains, paralysis, and atrophy of muscles. It is an excellent counter irritant producing no painful sores, and is frequently more effective than blisters.

It increases the circulation when, from any cause, there has been an obstruction—thus aiding and assisting nature in her efforts to convey a healthy current of blood to the different parts of the system.

Fig. 176 represents a metallic receiver for the leg with a rubber band on the upper border, which, when fastened to the leg by a strap and buckle, renders the boot air-tight.

In front of the boot is a stopcock; this has a rubber tube attached, connecting it to an air pump, which, when worked, exhausts all the air from the boot.

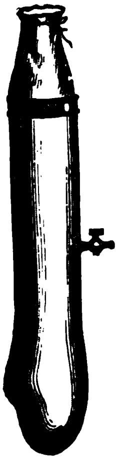


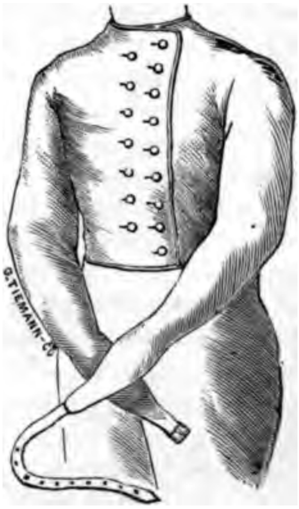
Fig. 177. Junod's Arm.

Fig. 177 Represents Junod's arm, which is analogous to the boot and will readily be understood by the drawing.

Price with Pump $15. to $25.

Junod's Boot, Arm and Pump $25.00 to $35.00, according to size and style.

Fig. 178. Straight Jacket.



Made of Canvass, with Lock.

Price $8.00 to $15.00.

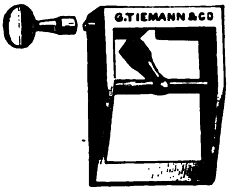
Although in the present day Lunatics are treated kindly and allowed all the liberty and favor consistent with their own welfare, it may sometimes become necessary to either separate them from their families on their surroundings, or confine them, to prevent them doing harm to others. This is the object of the straight jacket.

Patients, however, should be treated with all possible kindness, and the jacket taken off as soon as they become docile.

Fig 179. Buckle and Straps for Idiots.

Price of Buckle, $2.50.

Price for Wristlets, Belt and one Buckle, $6.00.



This is a cheaper arrangement than the straight-jacket, for confining maniacs.

It is intended for use in Asylums.

After confining the patient in the straps and locking the buckle, the key is taken out and kept by the attendant.

Dislocation Pulleys, (See Fig. 131), per pair, $7.00.

EXTRACTED FROM THE NEW YORK MEDICAL RECORD, May, 15th, 1874.

Use of Warm and Hot Water in Surgery. By Professor Frank Hastings Hamilton, M. D., New York.

Effect in Submersion in Warm and Hot Water.

No treatment hitherto adopted, under our observation, has been attended with equally favorable results.

Under this plan the area of acute inflammation is exceedingly limited; erysipelatous inflammation has been almost uniformly arrested or restrained, when it has actually commenced and it has never originated after submersion; gangrene has in no instance extended beyond the parts originally injured, and when progressing it has in most cases been speedily arrested (in gangrene hot water, or water at a temperature of from 100° to 110° Fahrenheit, is to be preferred). Septicæmia and pyæmia have not ensued in any case in which submersion has been practised from the first day of the accident. Purulent infiltration and consecutive abscesses have been infrequent, and always limited to the neighborhood of the parts injured, and of small extent. Traumatic fever, usually present after grave accidents, when other plans of treatment have been pursued, as early as the third or fourth day, has seldom been present when this plan has been adopted, and in no case has the fever been intense or alarming.

The phenomena usually observed in cases of recent lacerated or incised wounds, when submerged, are, a sense of comfort, yet not absolute relief from pain; on the second or third day the parts adjacent are swollen, but not much reddened; the integument generally assumes a white and sodden appearance, and with only slight tenderness. On the fifth, sixth, or seventh day the swelling is greater than usually accompanies other plans of treatment; and, with the inexperienced, is likely to excite alarm, but it is found not to be attended with increased tenderness, and it pits under pressure, showing that it is a condition of œdema chiefly. At this time the granulations are generally covered with lymph, or some exudate of a whitish color, and which might easily be mistaken for a diphtheritic deposit. At the end of fourteen days, or thereabouts (the period at which, in most cases, we substitute fomentation for submersion), the limb is still œdematous, the granulations are abundant, sometimes presenting a fresh, red appearance, and at others covered with the white exudate.

To what Class of Cases Submersion is especially Applicable.

Position of injury.—The lower extremities can only be completely and permanently submerged to a point three or four inches below the knee, and the upper extremities to a point a few inches above the elbow, consequently, submersion is limited to those portions of the extremities which are below the points mentioned.

Character of injury—Submersion in warm water demonstrates its superiority over other plans, especially in the case of a laceration or contusion of the hand or of the foot, when the integument and flesh are extensively torn—provided the limb is submerged without closing the wound—that is, without sutures or bandages; indeed, sutures are inadmissable when this plan is adopted, since the œdema which almost inevitably ensues would break away the sutures.

Mere contusions, without external lesions, have been treated almost constantly at St. Francis' by this method; and the results have been in all cases satisfactory, and occasionally they have progressed toward recovery in a manner to excite surprise.

Simple incised wounds have seldom been subjected to immersion, since it inevitably defeats union by first intension. Nor have wounds caused by *amputation* been treated in this manner, partly for the reason just given, and partly because of certain apprehensions that the depending position might expose the patient to the dangers of a secondary hemorrhage where large arteries have been severed and are exposed in the wound.

Value of Hot Water in Traumatic Gangrene.

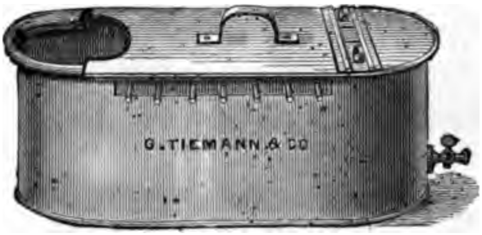
The power of hot-water baths, or water at or above the normal temperature of the blood, to arrest traumatic gangrene is remarkable; and the writer entertains a hope that its efficiency may not be limited to *traumatic* gangrene alone, yet this remains to be proven.

Method of Using the Warm-Water Bath.

For the arm and hand we have an oblong zinc bath, 23 inches long by 8 inches wide and 8 in depth, with somewhat flaring margins where the arm is to enter, supplied with a movable cover, which leaves an opening for the arm, and provided with a stop-cock to enable us to draw off and renew the water. Along the upper and outer margin of the bath are arranged small wire-pins, upon which pieces of cloth may be fastened for the purpose of suspending the limb. Care must be taken not to allow the limb to rest against the edge of the bath, so as to interfere with the circulation, and it must be carefully adjusted upon a shelf, beside the bed, in such a position as will be most comfortable to the patient.

Fig. 180. Bath for Arm, Forearm, and Hand.

Price $13.00.



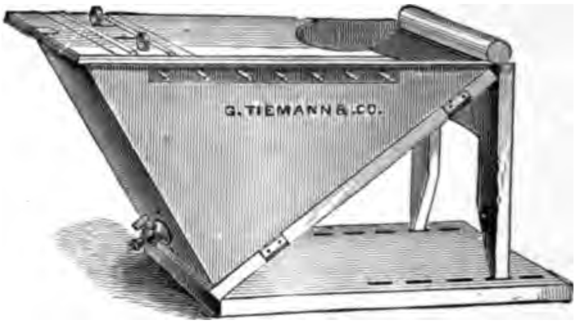
For the lower extremity a zinc bath is used also, somewhat larger, the floor being in the form of an inverted roof, the apex of which is below; the base being represented by the open top of the bath; this latter is provided also with a movable cover. The apex is supported by a wooden frame and horizontal board. This bath is, like the arm-bath, provided with pins for suspension of the limb, and a stop-cock.

In the case of the foot-bath, when it is found uncomfortable to project the foot from the side of the bed, the portion of the bed upon which the body reposes is elevated by mattresses, and the bath is placed on the floor of the bedstead.

We have not thought it necessary to keep the water at an absolute uniform temperature, so that its management is left very much to the judgment of the patient or his attendant; but usually it has been kept at such a temperature as to feel warm to the hand of the attendent—and this is found to be about 95° Fahrenheit. Sufficient uniformity has been attained generally by changing the water three times daily.

Fig. 181. Bath for the Lower Extremity.

Price $15.00


G. TIEMANN & CO.

In case of a recent wound, where secondary hemorrhage is at all liable to occur, the limb is dressed for a few hours with either warm or cold fomentations, and is left reposing in bed; but neither satures, adhesive plasters, nor bandages are applied. At the expiration of this time either the bath or the warm-water fomentations are commenced, and thereafter employed systematically. The patient is at liberty at any time to lift the limb from the bath, and he generally does this pretty often, to see how it is progressing.

Warm-water fomentations are regarded by us as always second in value to submersion in the preventing and cure of inflammation, and they are reserved, therefore for those examples in which submersion for one or another reason cannot properly be employed.

Fomentations are employed by us after about the fourteenth day in all those cases in which we employ submersion at first—occasionally, when the patient is weary of the confinement of the bath, the limb is taken out and fomented during the night.

We employ fomentations in amputations and other incised wounds when union by first intent is desired; in lacerated and contused wounds which cannot be subjected to immersion; in most examples of ulcers; in many syphilitic and cancerous sores; in some simple contusions and sprains. In short, to repeat what has been already intimated, with warm water, either in the form of the bath or fomentation, we treat nearly all surgical accidents. Carbolic acid, the chlorinate of soda or lime, and other antiseptics being reserved for very rare and exceptional cases.

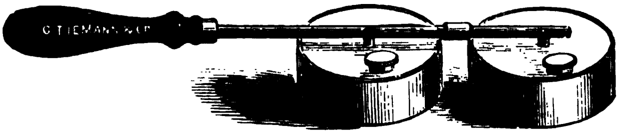
In using the fomentations we envelop the wound and limb in several folds of sheet lint or soft old muslin, saturated with warm water, the whole being enclosed in oiled silk or vulcanized rubber. This is changed about once in four or six hours.

Price of Adhesive Plaster,	per yard $ .75
“ “ Moleskin Adhesive Plaster, (on twilled goods)	per yard $1.50
“ “ Roller Bandage,	per pound, $1.50

EXTRACTED FROM THE PHILADELPHIA MEDICAL TIMES, Sept. 4th, 1875.

Fig. 182. Dr. Allan McLane Hamilton's Revulsor.

Price, $ 8.00.



Every neurologist is overrun by a class of patients that constitute a certain *opprobrium medicorum.* These are patients with dysæsthesiæ, spinal irritation, and a few other maladies, confined chiefly to women, and dependent upon uterine diseases. After the employment of many remedies, and after finding hopeless results, constituted either by relapses or temporary improvement, the case is discharged. In these cases I found the alternate use of heat and cold to be followed by the most desirable effects, particularly in spinal irritation. Of twenty-six cases of this kind I have cured fifteen, and have greatly improved all the others. I had used phosphorus and electricity with indifferent success, but the alternate application of heat and cold to the spine produced a decided impression. I at first directed the patients to employ icebags, and hot flat-irons covered by flannel, but subsequently made use of the instrument I will presently describe. In hysterical affections this mode of treatment was of great use, particularly those forms characterized by lividity of the surface and unconciousness, with rigidity. The surface became warmer and the circulation much more equable after ten or fifteen minutes' use of the revulsor.

For the alternate application of heat and cold I have devised the instrument figured in the cut. It consists of two chambers of brass two and a half inches in diameter by one and a half inches deep. These have screw plugs inserted so that they may be removed and the chambers filled, one with cold water and salt, the other with hot water. These chambers are fixed on a rod, and separated by an insulating or non-conducting substance. The rod terminates in a handle. The flat surface covered by thin flannel is placed against the bare back, on either side of the spinous processes of the vertebræ, and the instrument is passed up and down quite rapidly. As the heated surface moves instantaneously to where the cold one was an instant before, the effect is quite marked.

Dry heat and dry cold are much better as therapeutical agents than moist heat or moist cold. The effect is energetic; the skin is influenced more quickly, as there is no fluid between to act as a non-conductor.

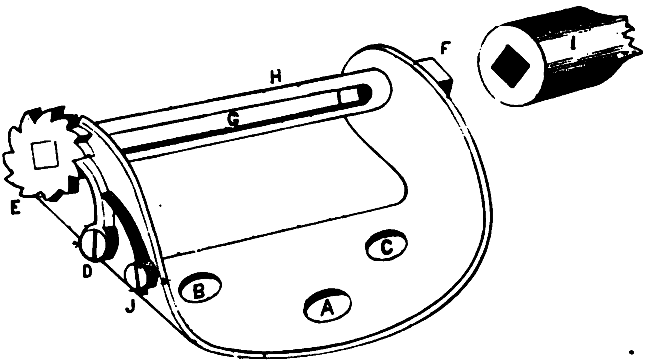
In paralytic conditions, local application of the revulsor to the muscles themselves seemed to increase the circulation in the tissues much more vigorously and successfully than did the faradic current.

Heat and cold, I am convinced, are valuable remedies that have not been thoroughly made use of.

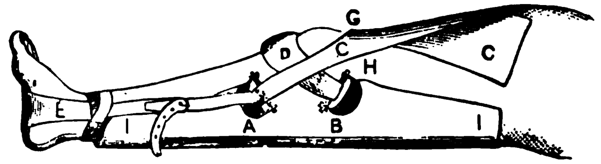
Fig. 183. Denison's Extension Windlass.

Price, $ 1.50.

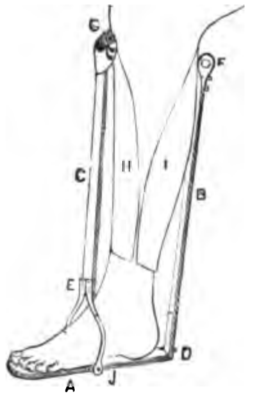
This little instrument is intended to serve surgeons in country practice, who, not being able to resort to an instrument maker in urgent cases, are compelled to depend on their own skill to devise means of treating fractures or deformities. It is a substitute for the screw-power, or the rack and pinion and may be attached to wooden supports or splints. If attached by one screw it will be movable, swivel like, self-adjusting; if fastened by two or more screws it is made stationary.



EXTENSION WINDLASS.—*A*, *B*, and *C*, hole for screws or tacks: *H*, winding-rod, slotted at *G*, squared at *F*, for key *I*, and held in position by ratchet *E* and pinion *D*, with spring-attachment *J*. Length of the winding-rod, two and one-quarter inches; between the arm of the brackets, one and three-quarters inch.



A A and *B B*, extension and counter-extension windlasses, each fastened by one screw to wooden posterior splint; *C C*, fan-shaped adhesive plasters, crossing each other at *C*, and threaded through winding-rods *F F*; D, padded roller over ligamentum patellæ, the ends of which are threaded through winding-rods *H H*; *E* reserve counter-extension to relieve *D* from uncomfortable pressure in front of knee *I I*, point at which splint is bandaged to the limb.



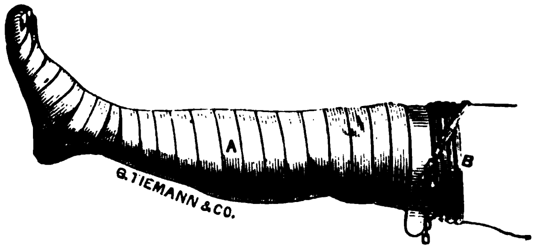
A, wooden foot-piece, about one-third inch thick, to which, at *D* and *J J*, the supports *C B*, of the extension windlasses, *G F*, are fastened. *H I*, fan-shaped adhesive plasters in position. Braces to go over instep (after Dr. L. A. Sayre's apparatus) are fastened to slat *C*, at *E*. The windlasses *G F*, are reversed and made stationary on the upper ends of the thin slats, so as to draw the adhesive plasters close to the limb, and over the winding-rods.

Many other uses and methods of attachments will suggest themselves to the ingenious surgeon. Our space does not allow a fuller description for which we refer to "The New York Medical Record May, 1875."

Fig. 184. Esmarch's Tourniquet.

EXTRACTED FROM SAMMLUNG KLINISCHER VORTRÆGE, No. 58, Leipzig, 1873.

Price, $ 3.75.



* * * * "I shall perform an operation (necrotomy, both legs) which would cause a much more profuse hemorrhage than that of yesterday, did I not adopt a method which will enable us to completely control the bleeding.

"While the anæsthetic is being administered, we envelop the lower portion of the limb in oil silk, to prevent soiling the bandage; then we bandage the legs tightly from the toes to above the knees with this elastic rubber bandage (A), which, by gradual compression, forces the blood out of the vessels of the limb. Immediately above the knee, where the bandage terminates, we wind the rubber cord or tubing (B) four or five times around the thigh, and join the one extremity by means of the attached hook to the chain at the other end. The rubber tubing or cord compresses all the soft parts, including the arteries, in such a perfect manner that not a drop of blood can enter the bandaged portion of the limb.

"This tourniquet possesses the advantage over all others, viz.: it can be adjusted to any portion of the limb, and the location of the principal arteries need not be considered.

"We now remove the elastic bandaging and the oil silk, and you will notice that both legs, below the tourniquet, present the appearance of the limbs of a corpse, the pallor of the same forming a remarkable contrast to the rosy hue of the skin above. You will also notice that we will operate exactly *as though on a cadaver*. * * * *

"After the operation, the rubber cord is slowly removed, the circulation restored, and those arteries which have previously remained unnoticed, tied. * * * The slumbering patient presents the same appearance as before the operation, his pulse is full and strong, and convalescence will no doubt follow much more rapidly and surely than if we had performed the operation in the customary manner.

"The tourniquet can be used with more or less complete success in nearly all operations on the extremities. In extirpation of tumors, in the removal of scrofulous sores or caries, and resections of small bones or joints, you can proceed in the manner I have just demonstrated, viz.: you need not loosen the tourniquet until the wound has been dressed."

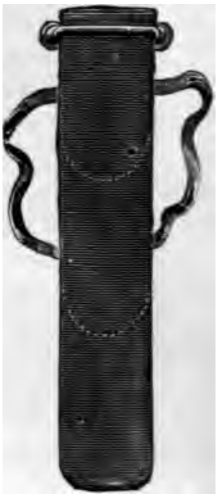
Spine Bags

FOR THE APPLICATION OF DRY COLD AND HEAT ALONG THE SPINE.

Fig. 185. Spinal Ice Bag.

Price, $4.50 to $10.25.

DIRECTIONS FOR PREPARING AND APPLYING.



Put ice (broken into pieces about the size of a nut or small walnut) into the opening of the bag, on the side nearest to the loops, until the contents of the lowest cell reach up to the bottom of the second cell; then put ice in the middle opening until it reaches up to the bottom of the third cell; and finally, fill the top cell. Then close the bag with the clamp, *placing it on the thickened, band-like part around the mouth,* and letting the screws be on the same side as the loops of the bag. When the clamp is properly applied, a very moderate pressure by its screws is needful to make the bag water-tight. All pressure beyond what is needful injures the bag. Care must be taken that each cell is not so filled as to cause it to become round, otherwise only a small portion of the bag will touch the back. It is also expedient that the contents of the several cells should only slightly overlap each other.

In applying the bag, place the smooth side of it in apposition with the back, the side bearing the loops being turned outwards. The bag may be kept in its position in various ways. If it is intended to be used for only a short time, or if the patient be in bed, the best plan is to lie upon it, taking care that it is exactly along the centre of the back. If the patient should wish to move about, pass the elastic band round the head, in order that it may hold the upper cell close to the back of the neck, and sustain the bag by fastening the clothes tightly outside of it; or pass a long tape through the lower loop, carrying each half of this tape over the shoulders, crossing one over the other in front of the chest, carrying them backwards round the waist, in order to clasp the bag closely into the small of the back, and then, bringing them forward, tie them in front. The bag will thus be sustained, and without allowing any of its weight to depend from the head. In this case the patient may move or walk about without any discomfort while wearing the bag.

As ice contains a considerable amount of air, this air, as the ice melts, accumulates at the top of the bag, and being a bad conductor of heat, prevents the still unmelted ice which it surrounds from exerting its intended influence: it is therefore necessary to unscrew the clamp occasionally, in order to let the air escape, and, if the bag is to be worn for a considerable time, to replace the air by a little fresh ice.

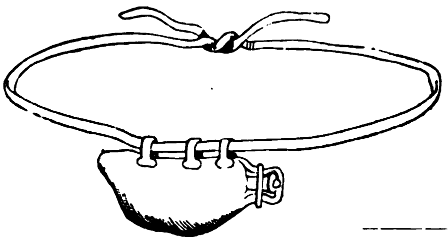
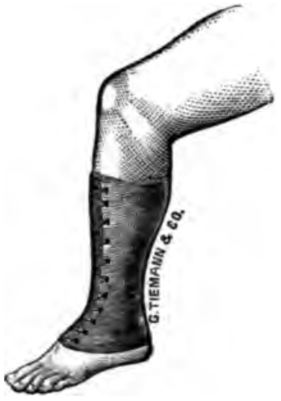


Fig. 185b. Turnbull's Ice Bag

FOR THE APPLICATION OF COLD TO THE EYE TO SUBDUE INFLAMATION.

Fig. 186. Andrew's Apparatus for Inflamed Ankle Joint.

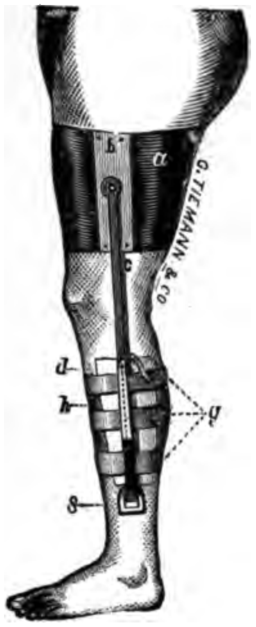

G. TIEMANN & CO.

For some years I have used with the greatest satisfaction and excellent results the following simple device. The cut gives a correct idea of it.

The top of the foot and the lower half of the leg constitute two cones, whose apices meet at the ankle. Now if any moderately firm and well fitting material surround these parts, and be laced together with some firmness, the two cones will be pressed apart, and extension of the ankle secured, or, to put it in different terms, the inverted cone laced to the leg is a counter extending force, while the lacing together of the hollow cone embracing the upper surfaces of the foot, tend to push that member downward, and thus makes extension upon the joint. To construct this a plaster cast should be taken of the foot and leg, with the foot hanging free and pointing somewhat downward. This position is found by experience to be much the best. A piece of wet russet harness leather is wrapped around the cast and crimped to a perfect fit by winding a stout cord, or a piece of webbing all over it. The leather laps over itself in front. After a few hours drying in an oven, or on a stove, the leather hardens and retains its shape. Before applying the leather, a little building out of the malleoli of the cast should be done with plaster of Paris, that the leather may be well moulded out, and not press painfully on those prominences. Eyelets are set in the overlapping edge, and in a strip of leather sewed to the part opposite it, so as to allow of lacing it up to any desired tightness. The eyeletted edges of the leather should be wider apart on the dorsum of the foot than elsewhere, as owing to the yielding of that member, the edges lace together more than on the leg. The brace is finished by pasting in a chamois leather lining. It fits the limb like wax, keeps up a gentle and desirable pressure on the joint, maintains immobility and pushes down the foot so as to make an effective extension of the ankle-joint. No screws, racks and pinions, nor even adhesive straps are required. The action of the instrument has pleased me beyond measure by its simplicity, the ease with which it can be taken off and re-applied, and its efficiency in curing the inflammation.

The same principle can be temporarily carried out by means of a dextrine splint open behind, and compressed by an elastic bandage, or even by a common roller.

Fig. 187. Andrew's Brace for Inflamed Knee-Joint.



If the knee can still be straightened, I apply the following apparatus:

The leather lacer at the top spreads its pressure over a wide surface, and also spreads out somewhat upon the bulge of the nates, so that hardly a perceptible pressure is exerted upon the veins at any one point; scarcely any, hence there is little or no tendency to that venous congestion and swelling of the parts below, which authors say the ordinary apparatus produces if no bandage is used, yet I think that the practice of employing a compression bandage is useful to the knee, even if no tendency to swelling exists.

a. Leather, laced in front.
b. Steel plate, rivetted to each side.
c. Rod, terminating in slot *s*. A similar rod is on the other side of the limb.
s. Slot, with a friction roller.
g. Adhesive straps, to the lower end of which an elastic band is sewed.
h. Elastic band, terminating in a leather strap, which is passed through the slot *s*, and turned up, and, being strongly stretched, is buttoned to a knob, *d*.

The rod *c* is much slenderer than represented in the engraving, and is loosely jointed to the steel plate *b*. The broad perpendicular adhesive strap should terminate a little above the slot *s*. To the lower end a stout elastic band is sewn, a few inches long, and of the kind used by some wooden-leg makers for springs. A leather strap is sewn to the elastic.

The opposite side of the limb is armed in the same way. The hip leather being laced on, the strap and elastic bands carried down to the slot *s*, whose upper border is made by a little friction roller that the band may run easily. The strap being drawn through the slot, is then stretched firmly upward by the hand and buckled to the knob *d*. It will be observed that while at first glance this may seem to be pulling up instead of downward, yet the fact is, the elastic in passing under the friction roller changes its direction, and in fact, pulls strongly downward on the adhesive plaster and the limb to which it is attached. The same manœuvre repeated on the opposite side doubles the force of the extension. The use of the elastic bands is not strictly necessary. A double tape carried through the slot and tied over the knob, is simpler, and, if properly attended to, is equally efficient; but the elastic is convenient, because in any yielding or stretching of the dressings its contractibility still keeps up the tension, without requiring so much watchfulness on the part of the surgeon. Elastic bands were in common use fifteen years ago, but of late have been much neglected. If occasion demands it, the surgeon can easily construct an extempore form of this splint, using simply leather, wood, and a few screws, and putting them together with his own hands.

It will be observed that there are no racks and pinions, screws, nor other mechanical contrivances for increasing the power. The amount of extending force required on a straight inflamed knee is never very great, and never beyond what the hands can readily exert by simply pulling firmly first upon one strap and then upon the other.

There is no ring or band surrounding the limbs at the lower end of the instrument, because such a thing is useless. The slot is kept in place by the band which passes through it, and cannot possibly get away. If it is desired to remove the apparatus for any purpose, all that is necessary is to unbutton the two straps, when the brace can be slipped instantly off over the foot, and can be as easily re-applied. It is light, convenient, painless, and efficient.

DIRECTIONS FOR MEASUREMENT.

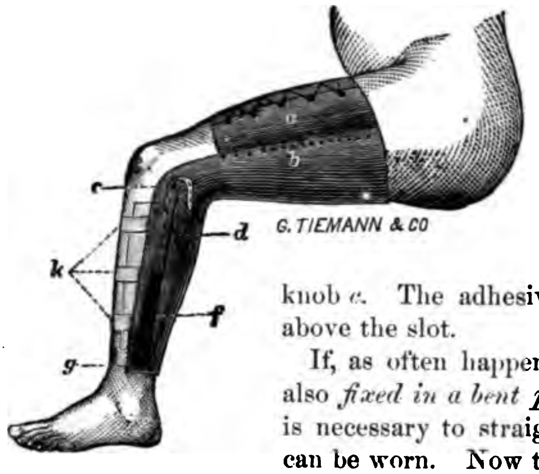
1. Circumference of thigh close to bulge of nates.
2. Circumference of thigh one inch above top of patella.
3. Distance of these two circumferences from each other.
4. Distance from upper circumference to a point two inches above lower end of malleolus.

Andrew's Elbow and Wrist Splints.

For chronic inflammation of the *wrist*, I use the following easily constructed apparatus. A rectangle of thin brass or tin is bent into the form of half a cylinder, long enough to extend from the elbow to the tips of the fingers. At each side of the elbow is a slot and friction roller. At the other end are two eye-holes in the end of the brass, half an inch in diameter. The hand being enveloped in rubber, adhesive plaster, with tapes attached, is secured by tying the latter into the eye-holes. Other plasters on the fore-arm above the wrist have elastic bands attached to their upper extremities, terminating in thin leather straps. The latter pass over the friction rollers at the top of the instrument, turn downward, and are buttoned to knobs on either side. This makes perfect extension.

If the *elbow* requires extension, either in a straight or bent position, the same principle is perfectly available by merely varying the form of the tin case. The friction rollers so often referred to are the simplest possible things, they consist of simple pieces of strong wire soldered to the brace, so as to cross the desired edge of the slot. A little cylinder of tin or brass loosely surrounds the wire, so as to revolve freely when the elastic band is drawn over it. These things are simple, easily made and easily managed. The whole complex system of screws, nuts, racks, pinions and extension bars of every description, are, in nine-tenths of the cases, cumbrous abominations compared with the less complicated plans. I confess to having used them in former years, but at present I only employ them in a few peculiar cases.

Fig. 188. Andrew's Splint for Inflamed Knee in the bent position.



a. Leather laced in front. *b.* Brass splint, hammered to fit the limb. *c.* A knob. *d.* Leather strap. *f.* Elastic band. *g.* Slot and friction roller. *k.* Adhesive strap, to the lower end of which the elastic band is sewn, then passed through the slot, drawn strongly up, and its leather buttoned to the knob *c.* The adhesive straps must terminate somewhat above the slot.

If, as often happens, the knee is not only inflamed, but also *fixed in a bent position*, most surgeons hold that it is necessary to straighten the knee, before an apparatus can be worn. Now the straightening process itself is irritating, and tends to exasperate the inflammation. I have resorted with decided advantage to the following plan: A plaster cast is first taken of the posterior half of the limb, from the nates to the heel. To this a thin splint, *b*, of hammered brass, is fitted. The upper part is completed by the addition of leathers, *a*, which lace in front, and by thus embracing the thigh and the lower portion of the hip in its hollow frustrum of a cone, makes a basis for counter extension. A slot, *g*, is made on either side of the lower end, and provided, as in the former apparatus, with a slender friction roller on the upper border. Adhesive strips are applied in the same manner as before, terminating in elastic bands or doubled tapes, which pass down through the slots, and turning up across the rollers, button or tie to the knobs, *c*. By some addition to its details, this apparatus can have a joint to the knee, and be made to gradually straighten it.

DIRECTIONS FOR MEASUREMENT.

In order to make the brass splint a good fit, a plaster cast should be taden of the limb and sent to us.

Fig. 189. Sayre's Plaster Paris Shears.

Price, $7.00.

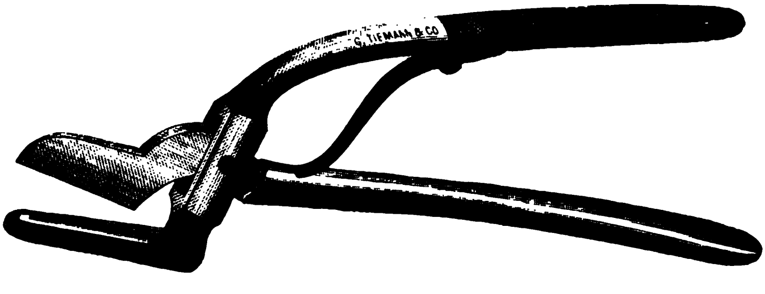
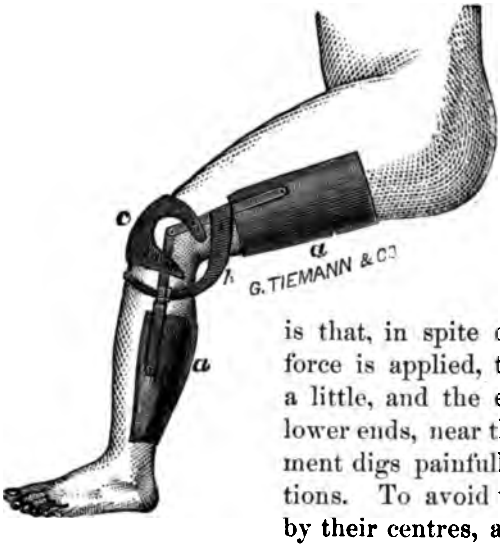


Fig. 190. Andrew's Instrument for Straightening Bent Knees.



a a. Sheet steel pads, lined with chamois, embracing posterior half of leg and thigh. *b.* A curved screw, on which a nut turns, to make forced extension. *c.* Knee cap.

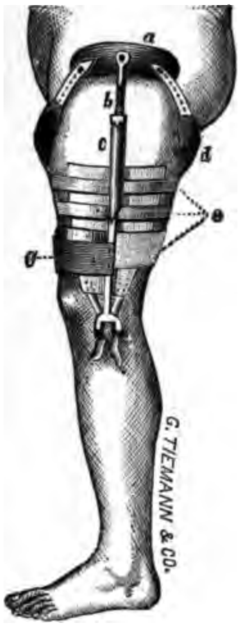
Many surgeons still rivet the thigh and leg pieces, *a a*, fast to the rods that pass to the joint of each knee, thus making each arm of the apparatus a rigid lever. The evil of this plan is that, in spite of the knee-cap, *c*, when the extension force is applied, the centre of the instrument draws back a little, and the entire pressure is made at the upper and lower ends, near the hip and the ankle. Here the instrument digs painfully into the flesh, in spite of all precautions. To avoid this, the armor-pieces, *a a*, should hang by their centres, as a cannon hangs by its trunnions, by movable joints, so that they always apply themselves painlessly to the surface of the limb, pressing equally in all parts. This part of the plan has been in use quite a number of years, and seems to have occurred almost simultaneously to several surgeons, while it is still unaccountably neglected by others. Being an old device among mechanics, its invention can not be specially credited to surgeons. The power required for the extension has usually been obtained either by a straight brace screw behind the knee, or by a small endless screw on the side. The straight brace screw has the inconvenience of being in the way when the patient desires to sit in a chair. The endless screw-joint is by far the neatest and most compact power that has been used, but it has the objection of being expensive; and, moreover, as it is so close to the centre of motion, the pressure of the teeth of the semi-circle is immense, and not unfrequently breaks them. Expensiveness is a serious objection for great numbers of patients who need treatment; I have, therefore, sought to combine the economy of the screw with the convenience of the endless screw-joint. For this purpose I attach on each side a simple screw, bent to a semi-circle. The screw is riveted firmly to the upper arm of the instrument, and runs through a perforated projection of the lower arm. A nut, turned by a key, furnishes the requisite power to force the limb to a straight position.

DIRECTIONS FOR MEASUREMENT.

Circumference at top of thigh, *Inches.*
Circumference above the knee, "
Circumference at the knee, . "
Circumference below the knee, "
Circumference about the ankle, "

Distance from the centre of knee to perineum, . . *Inches.*
Distance from knee to above maleolus, ... "
Right or left leg.

Fig. 191. Andrew's Morbus Coxarius Splint.



a. Top pad, applied just below crest of ilium.
b. Screw, sliding in tube, *c*, and regulated by a nut.
d. Perineal band.
g. Half band of steel in front of thigh.
e. Adhesive straps, fastened to lower end of instrument, both sides of the thigh, by tapes.

All the splints for treating *morbus coxarius* are modifications of the original idea of Dr. H. Davis. Most of them make extension by means of a rack and pinion, which works well. Surgeons living in country districts, however, find it rather difficult to get them constructed by their home mechanics. They are deterred especially by the rack and pinion, which looks simple enough, but which is very difficult of construction to country locksmiths and gunsmiths. In such circumstances I have often advised the country surgeon to substitute a screw sliding in a tube, for the ordinary extension bar, and the whole difficulty then disappears. The extension is regulated by the nut. which can be made hexagonal, and turned by a little wrench; but even this is not necessary. If the nut is made to work easily, the surgeon can seize the tube in one hand, and the screw in the other, and easily make, with his hands, all the extension the patient will tolerate, while the thumb turns the nut down against the tube to hold the extension. The nut should have a little knob or tooth on its lower side to fit into a notch in the top of the tube, to prevent it turning spontaneously during the movements of the patient. The accompanying cut shows the screw fitted to a splint somewhat like that of Sayre. The steel semi-circular band, *g*, goes half around the front of the limb, and on the opposite side has a short rod projecting down beside the knee to tie tapes to, like the one shown on the hither side in the cut.

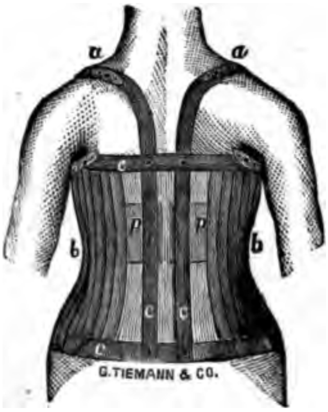
In certain cases it is desirable to use a long splint, coming down to the foot, and riveted into the heel of the shoe. In that case the adhesive straps are transferred to the leg, and the tapes tied to eyelets or knobs properly secured to the lower end of the rod, or to the shoe. The modifications required are obvious and simple, and do not need an engraving to be understood.

The belt strap around the waist, and the strap to buckle around the lower part of the thigh, insisted on by many surgeons, are utterly useless; the instrument assumes a better position without them. Its natural direction is decided by the line between the extremities of the perineal band and the tapes on the adhesive straps; and this position should not be interfered with.

DIRECTIONS FOR MEASUREMENT.

1. Length from trochantor major to knee-joint. 2. Circumference of thigh above knee. 3. Length of Perineal Band.

Fig. 192. Andrew's Spine Brace.



a a. Shoulder straps. *b b.* Corset, lacing in front, and well filled with whalebone. *c c c c.* Steel framework. *p p.* Pads, pressing on each side of the vertebræ.

The construction of a proper spinal supporter requires the presence of the patient. Whenever possible, there should be applied to the case the combined skill of the surgeon and of the instrument maker, for the proper adaption of apparatus to the varying needs of spinal disease is a matter of considerable difficulty.

The plaster-jacket is of little use in Pott's disease, except where the deformity is below the level of the axillæ, because the material has not tenacity enough to carry shoulder-straps without breaking. Moreover it can not be easily removed for bathing purposes, and, if worn a long time, there accumulates under it an unhealthy amount of decomposing cuticle. On account of these and other inconveniences, it is not likely to supersede well-made spinal supporters, but nevertheless it is a very useful resource in many cases.

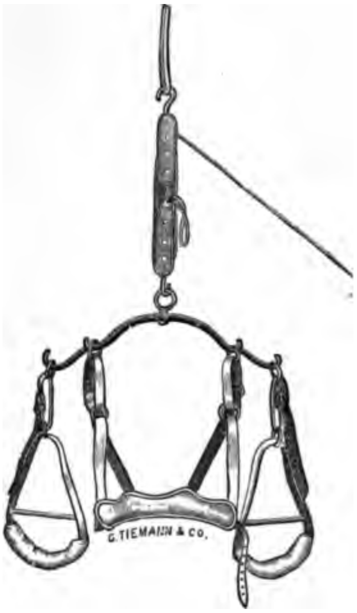
There are only two principles (*i. e. splint* and *corset*) of any real value in this class of apparatus. *First:* The *splint principle*, which, applying steel splints with proper pads along either side of the spine, seeks to lash the body firmly back to the splints. This is not merely an attempt mechanically to arrest the growth of the deformity; it is curative of the inflammation. Every vertebra rests on three surfaces of support, viz.: the body of the bone in front, and the two articular processes behind. The body of the bone is alone diseased, and its inflammation is perpetuated by the rocking and pressure of the other vertebræ upon it. The articular processes are perfectly healthy in most cases. Now by flexing the spine well back against the splint, the pressure is brought upon the healthy articular processes, and taken off from the bodies of the vertebræ, which, being thus relieved, get well spontaneously.

Second: The *corset principle*, which is best adapted to the adult female form. Here the wide spread of the hips makes a rapidly sloping frustum formed by the chest, the junction of the two being at the smallest part of the waist. If a well-fitted corset, full of whalebone, be applied, and be made so as to lace in front, instead of using the ordinary steel locks, the action is as follows: The inverted cone of the waist rests in the hollow cone of the upper half of the corset. Now, by drawing upon the strings at the lower cone, the corset tends to rise on the slope of the hips and to push up the cone of the chest with it. Hence the corset principle is a valuable auxiliary in adult female cases and to a less extent in males also. In young children there is no contraction at the waist, and a corset acts only as a splint.

Now it is easy to combine both these principles in one instrument, as shown above. The corset should lace and not lock in front. The drilling of which it is composed must be gored to fit the waist accurately, and it should be filled as full of whalebone as it will hold. The engraving and explanation, Fig. 192, will render the plan clear.

Fig. 193. Sayre's Suspension Apparatus.

USED WHILE APPLYING HIS PLASTER OF PARIS JACKET.



Consists of a curved iron cross-beam, to which is attached an adjustable head and chin collar, with straps fitted to axillary bands. To a ring in the centre is hooked a compound pulley, the other end of which is attached to a hook screwed into the ceiling. An iron tripod may be used for the same purpose.

The bandage used by Dr. Sayre in making his *Plaster Paris Jacket* consists of loosely woven material, such as cross-barred muslin, mosquito netting, or crinoline. This is torn into strips three yards long, and from two and a half to three inches wide. Its meshes are filled with freshly-ground plaster of Paris, and then rolled up loosely like an ordinary roller; they are then set on end in a basin and completely covered with water. As soon as the escape of bubbles has ceased, the bandages are ready for use.

Application.—After suspending the patient, a shirt woven or knit without seam, and tightly fitting the body, is pulled down and an opening made in front and rear, through which a ribbon or piece of bandage is passed, to hold in place a handkerchief placed in the perineum—avoiding all wrinkles by pulling the shirt well over the hips. Then take the plaster roller, squeeze it gently so as to remove all surplus of water, and commence just around the smallest part of the body, going to the crest of the ilium and a little below it; lay it around the body smoothly in close contact with all the irregularities of the surface (but not too lightly), over the ilium and dipping into the groin and over the abdomen and dipping into the groin again, and so on from below upwards in a spiral direction, until the entire trunk has been enclosed from the pelvis to the axillæ. After one or two thicknesses of bandage have been applied, narrow strips of perforated tin are placed in parallel with each other upon either side of the spine, two or three inches apart and in sufficient number to surround the body, and another plaster-roller carried around the body to cover them. These strips strengthen the bandage and obviate the necessity of increasing its weight by additional applications of plaster.

If there are any very prominent spinous processes which, at the same time, may have become inflamed from lying in bed or by pressure from instruments, it is well to guard them by means of little pads of cotton placed on either side of them before applying the bandage.

Dr. Sayre suggests further: to take two or three thicknesses of roller bandage.

three or four inches long, and place them over the anterior superior spinous process of each ilium. These to be removed just before the plaster has completely set, and so leave the bony part free from pressure after the soft parts have shrunken under the influence of the contraction produced by the drying of the plaster. Also, just before the plaster has set, to place one hand in front of the ilium and the other over the buttocks and squeeze the cast together, so as to increase the space over the bony prominences. The plaster becomes set in a very short time and the patient may be removed from the suspending apparatus and laid upon the face or back, until the hardening process is complete.

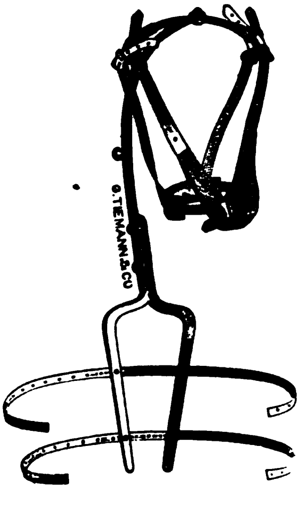
Directions for Measurement.

1. Age of patient.
2. Circumference of head around chin, ... *Inches.*
3. Circumference of head around occiput, ... "

Price of Sayre's Suspension Apparatus, with plain pulleys, . .	$8.00
The same, with double-hooked cross-beam, ...	9.00
The same, with brass dislocation pulleys, ...	15.00
Tripod, ...	10.00
Cross-barred Muslin, per yard, ...	.22
Seamless Shirts, ...	2.50 to 3.50

Fig. 194. Sayre's Jury Mast.

Price, $12.00.



Consists of two pieces of malleable iron, bent to fit the curve of the back. To the lower portion are attached three or more roughened tin strips, long enough to go nearly around the body. From two cross-pieces of the upper extremity springs a central shaft, carried in a curve over the head and capable of being elongated at will. To this is attached at its upper extremity a swivel crossbar with hooks, from which depend straps supporting a head and chin collar.

Application.—The patient having been encased, in the usual manner, in a few thicknesses of plaster roller, the Jury Mast Apparatus is put over this, care being taken that the iron strips are bent so as to conform to the surface of the plaster, and that the shaft over the head be kept in the same line with the spinous processes. The perforated tins are carried round the body, their ends, however, not being allowed to meet. The apparatus having been carefully adjusted, fresh layers of plaster bandage are now applied, in order to hold the instrument firmly in its place.

[See next page.]

DIRECTIONS FOR MEASUREMENT.

1. Bend a flexible strip of lead to the contour of the back, commencing at the top of the head; carry along the spine to the sacrum. Carefully remove and trace on paper; mark the position of the scapulæ, iliac crests and disease.
2. Circumference: top of head around chin, . . . *Inches.*
3. Circumference: around cranium, ... "
4. Circumference: pelvis below iliac crests, ... "

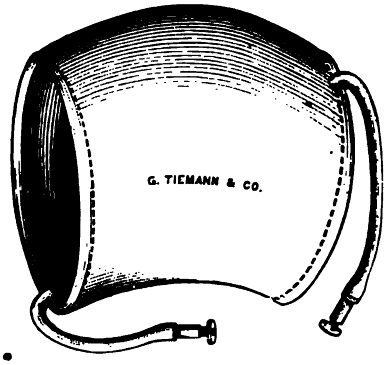

G. TIEMANN & CO.

Fig. 195. Sayre's Rubber Compressor.

FOR KNEE AND ANKLE JOINT.

A double sac of suitable form for the knee or ankle. By means of tubes at either end hot or cold water may be made to either pass through, or it may be retained. In this manner even pressure with the advantage of a hot poultice can be made, which, although being exceedingly powerful, can be easily borne on account of its soft elasticity.

Sayre's Rubber Knee Compressor, $6.00

DIRECTIONS FOR MEASUREMENT.

Circumference above knee, . *Inches.*
Circumference at knee, . "
Circumference below knee, . "

Sayre's Rubber Ankle Compressor, $6.00

DIRECTIONS FOR MEASUREMENT.

Circumference of instep, . . *Inches.*
Circumference of ankle, . "
Circumference above ankle, . "

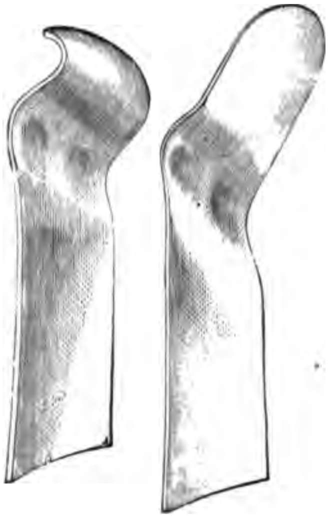


Fig. 196. Coover's Splint for Fractures of the Arm and Hand.

Price, $1.50.

Fig. *a* can be used for all fractures of the arm and hand, with the fingers fixed upon the hand, and passive motion can be directed the first, second, or third week, as the attending surgeon may direct, thereby keeping the tendons loose in their sheaths, and the patient will be enabled to secure the use of his limb sooner than by any other splint.

Fig. *b* will serve the object better where the surgeon desires to keep the hand and fingers extended.

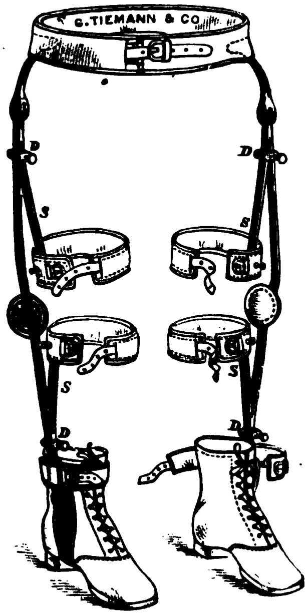


Fig. 197. Truehart's Genu Valgum Brace.

Price, $35.00.

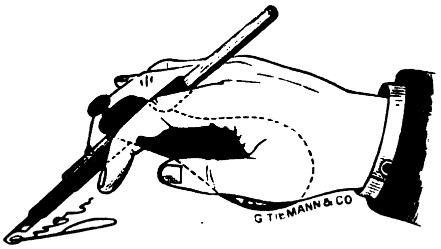
(*New York Medical Record, August, 1878.*)

The accompanying cut well illustrates a modification of brace for the treatment of knock-knees and similar deformities of the legs, which presents, I think, a new and valuable improvement and possesses decided advantages over the forms of brace now generally in use. The springs, *s s s s*, the bearing of which can be delicately adjusted by shifting the slides, *d d d d*, up or down, are the characteristic feature of this apparatus. The brace being attached, at the site of deformity on either side, by means of the springs, which fit closely and firmly to the limbs, perfect coincidence and harmony of movement between leg and brace is secured, which is sadly wanting where the attachment is effected by means of the long straps of the ordinary brace. The corrective force exerted is continuous, and in all positions the wearer may assume is decided and equable, while, at the same time, the articulations of the limbs have such a normal freedom of excursion, laterally as well as antero-posteriorly, that no disfiguring habit of gait is liable to be contracted by the patient, and there is no tendency to trip or fall; even the child of only a few years can wear the brace with little or no annoyance, and, on first trial, walk or even run with surpassing ease and precision.

DIRECTIONS FOR MEASUREMENT.

1. Patient's name.
2. Patient's age.
3. Length from sole to ankle-joint, *Ins.*
4. Length from sole to knee-joint, "
5. Length from sole to hip-joint, "
6. Length from sole to iliac crest, *Ins.*
7. Circumference of pelvis, "
8. Circumference of thigh at *s*, "
9. Circumference of leg at *s*, "
10. Circumference of ankles at *D*, "

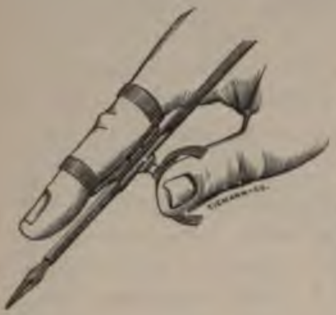
Fig. 198. Velpeau's Writers' Cramp Apparatus.



Price, 10.00.

There are many devices for this purpose, of which the above is one of the simplest and most effective. It consists of an oblong ball, made of wood or hard rubber, to be grasped by the hand, keeping it in a proper position. To this are attached a couple of half-rings, serving as rests for the index and middle fingers. A penholder passes through the neck of the ball at a convenient place near the extremity, which can be adjusted and made firm by a thumb-screw. Thus a person affected with writers' cramp may be effectually treated without being necessitated to leave off writing.

Fig. 199. Mathieu's Writers' Cramp Apparatus.



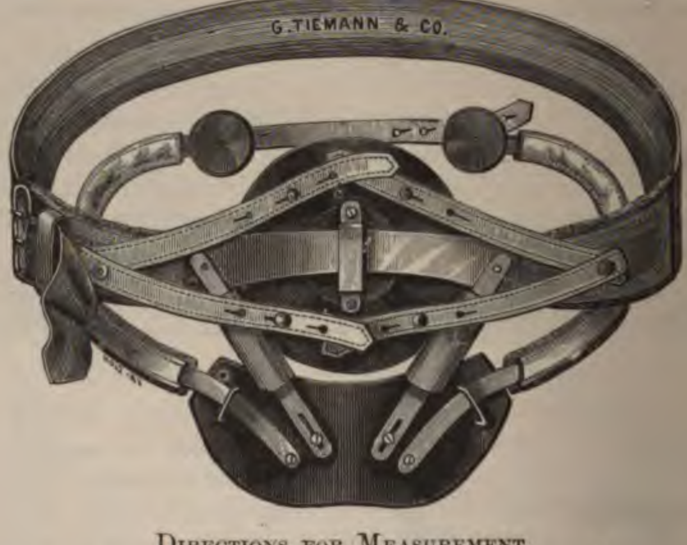
Price, $6.00.

This instrument consists of two rings for the index finger, and a half ring, properly distanced from the others, to rest the thumb. These are fixed to a spring slide, into which a common penholder can be easily adjusted. This is a somewhat simpler apparatus than the preceding one and answers well in slight cases.

Fig. 200. Walker's Combination Supporter.

FOR UMBILICAL AND ABDOMINAL HERNIA.

Price, $12.00.


G. TIEMANN & CO.

Directions for Measurement.

Circumference at umbilicus, ... *Inches*
Diameter of protrusion, ... "
Circumference of pelvis, ... "

Fig. 201. Stillman's Ratchets and Brackets.

a, b, c, d, e, f, g.

A pamphlet explaining their use, by Charles F. Stillman, M. D., may be had on application.

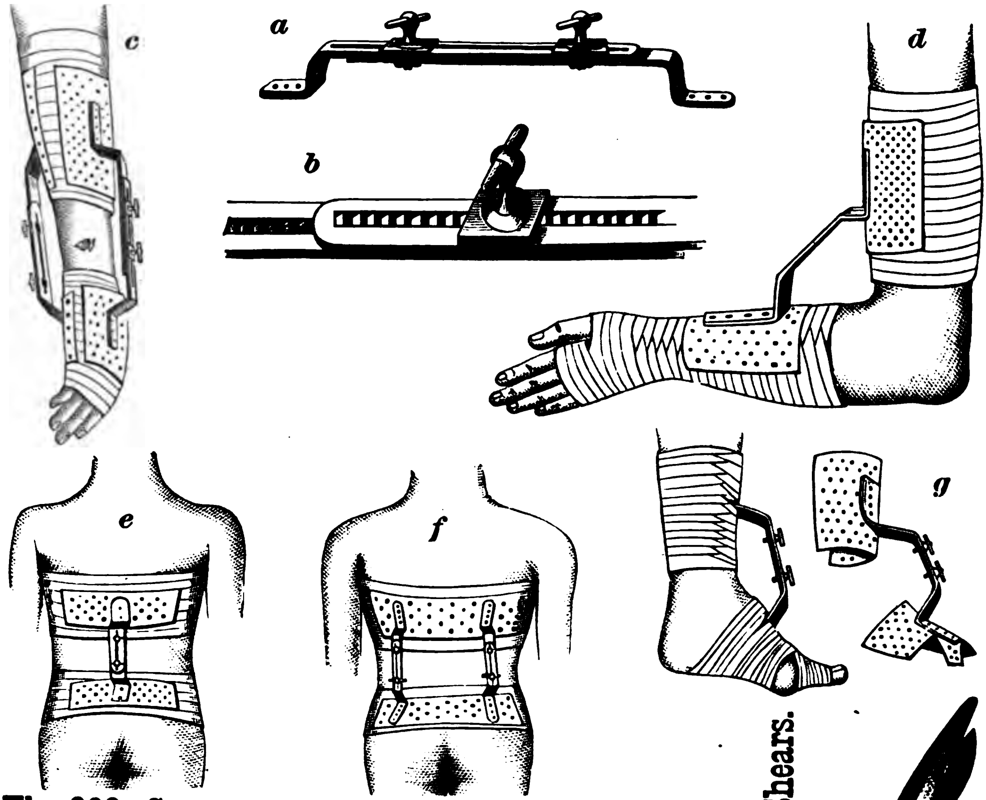


Fig. 202. Szymanowsky's Plaster Bandage Shears.

Price, $9.00.

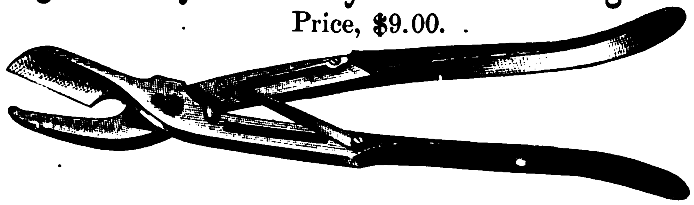


Fig. 203. Brun's Bandage Shears.

Price, $10.00.

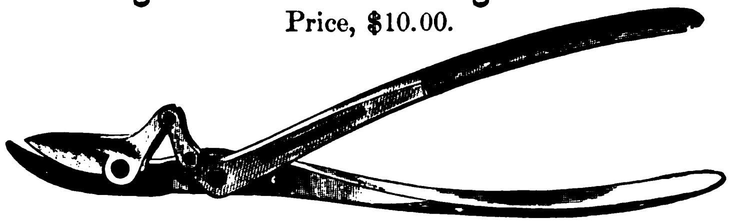
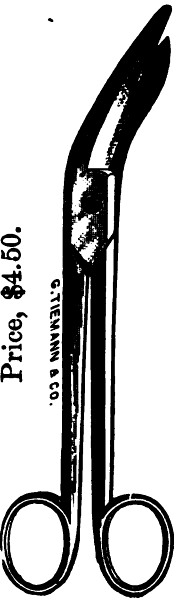


Fig. 204. Esmarch's Bandage Shears.

Price, $4.50.


G. TIEMANN & CO.

See also Figs. 111, 165, 189.

Fig. 205. Wood's Horse-Shoe Pad Truss.

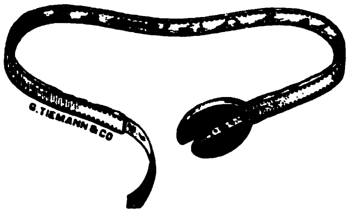


Fig. 206. Doisneau's Compress.

FOR THE SEMINAL CORDS.

Price, $4.00.

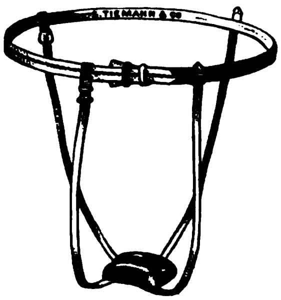


Fig. 207. Matthieu's Prolapsus Ani Supporter.

Price, $5.00

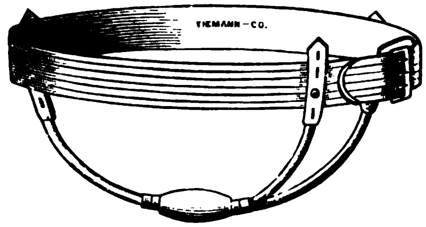
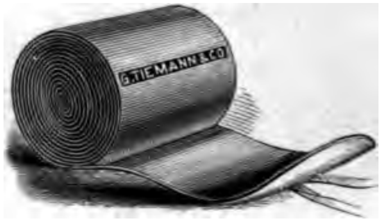


Fig. 207b. Rubber Bandage.

FOR THE TREATMENT OF ULCERS, ECZEMA, VARICOSE VEINS, &C.



Martin's Solid Rubber Bandage,

10 feet long by 3 inches wide,	$2.00

Bulkley's Rubber Bandage,

12 feet long by 3 inches wide,	$1.25

"Both the above are made of the best solid pure rubber, very elastic—the latter lighter than the first. On one end a piece of cloth is cemented, an inch or so wide, to give firm attachment to the tapes, which are to tie the free extremity; these tapes should of course be rolled inside, and the bandage prepared for application exactly as any other roller bandage. There is the greatest difference imaginable between the firm, resisting, non-elastic cotton bandage and that of soft, pliable rubber, which yields with every motion and yet exercises its ceaseless pressure and support to an extent which can be regulated to the utmost nicety with each days changing condition of the parts."

Fig. 208. Apparatus for Contracted Wrist.

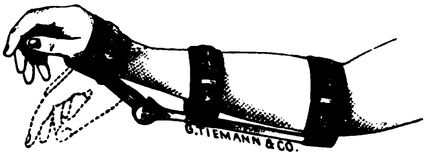
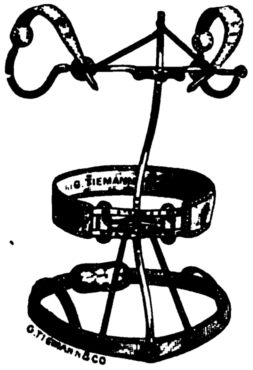

G. TIEMANN & CO.

Fig. 209. Brace for Pott's Curvature.

Fig. 210. Brace for Lateral Curvature.

TWO DELICATE FORMS OF SPINAL BRACES,

BY GEO. TIEMANN & Co.



DIRECTIONS FOR MEASUREMENT:

For Brace, Fig. 209, same as given on page 3.

For Brace, Fig. 210, same as given on page 4, Part IV.

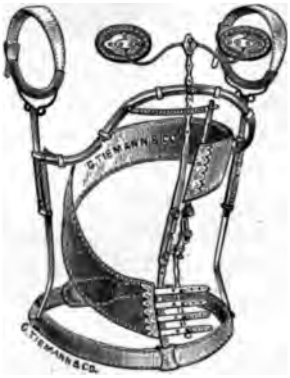
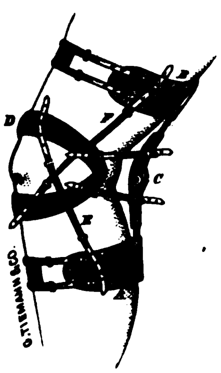


Fig. 211. Bacon's Patella Support.



Patients recovering from transverse fracture of the patella, with "aponeurotic union," are constantly liable to repeated ruptures of this adventitious tissue, each successive accident widening the gap between the fragments of the bone and lessening the power of the leg extensors. The frequency with which such patients fracture the opposite patella, in their attempts to save the weakened joint from renewed injury, is well known.

To give efficient support to joints thus impaired, the appliance here figured has been devised, and has been worn with satisfaction by several patients, one of whom, having an ill-united fracture of each patella, was able to mount a flight of stairs immediately upon the application of the apparatus, for the first time since the injury was received.

A complete description mailed on application.

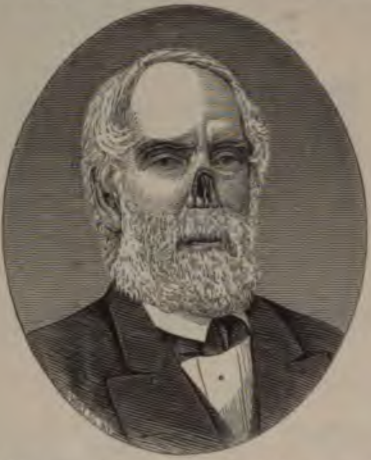


Fig. 212. Loss of Nose.

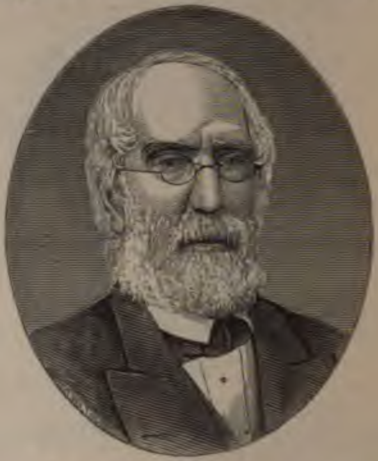
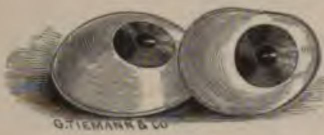


Fig. 213. Artificial Nose.

After much experimenting, an artificial nose, made of thin silver, shaped to conform to the rules of beauty and, at the same time, to resemble the lost member as nearly as possible, has been found the most satisfactory. It is accurately fitted to the skin, covering the remaining part of the nose as well as the opening. It is held in place by a spectacle frame superiorly, while a pair of springs, attached to its base, enter the fossæ and secure its position below. It can be worn with ease, is very light and, if nicely fitted, will hardly show points of attachment, being painted to correspond to the tint of the face.

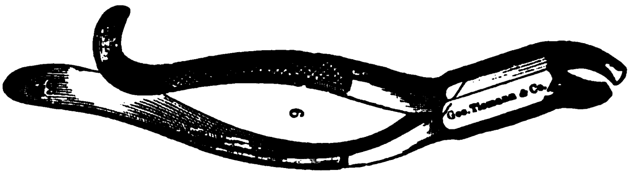
Fig. 214. Artificial Eyes.



We have on hand a large assortment of all colors, forms and sizes, for the right and left eye, from which personal selections may be made, or we can send them by mail; but as the success of being well matched depends on the exactness of the description and the minuteness of adaptation and accommodation of the artificial eye to the remains of the natural one, we advise patients to apply to their physician and have him send us the following particulars:

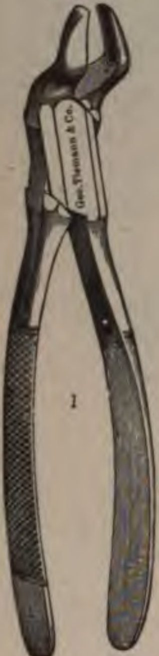
1. Right or left eye?
2. Diameter of the iris of the well eye.
3. Normal diameter of the pupil.
4. Degree of atrophy of globe in comparison to well eye.
5. Form of anterior of stump, flat, round, or conical.
6. Partial or entire presence or absence of cornea remaining transparent.
7. Depth of furrow behind lower lid.
8. Sex and age of patient.
9. A drawing (natural size) representing accurately the eye region of both eyes, the color of the iris and sclerotica (or a minute description).

PART V.

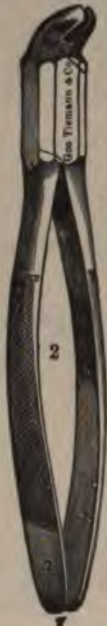

Geo. Tiemann & Co.

TOOTH FORCEPS.

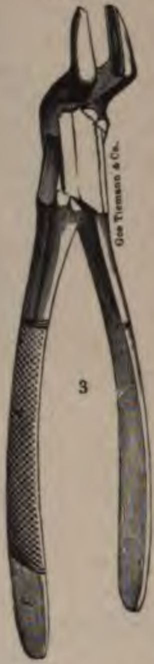
Wisdom.



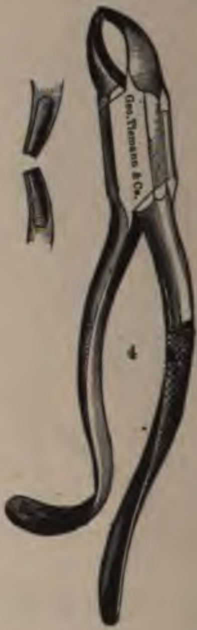
Lower Wisdom.



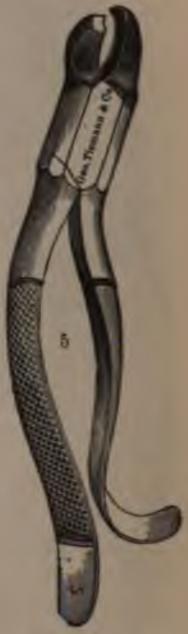
Stump.



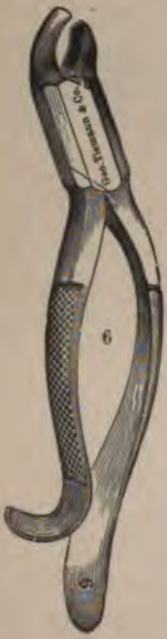
Upper Bicuspid.



Upper Molar. R.

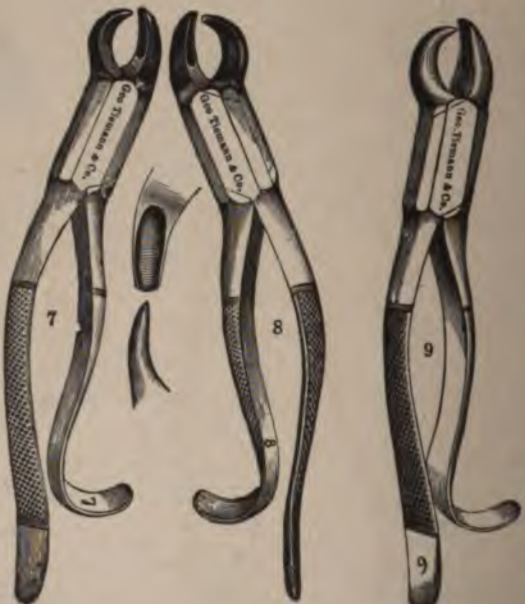


Upper Molar. L.

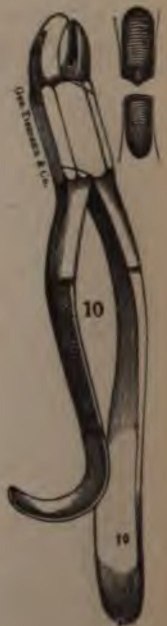


Upper Molars, Cowhorn.

R. L. Either side.

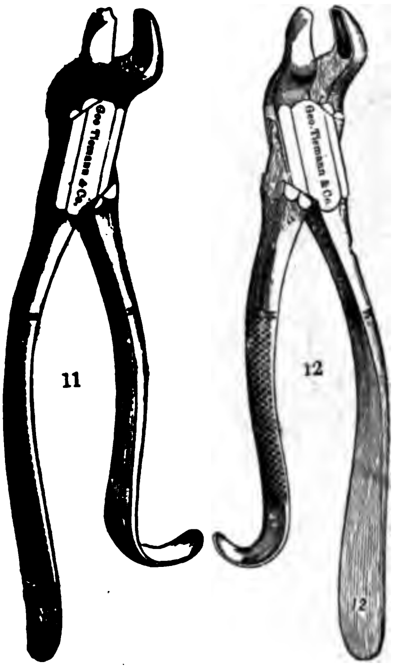


Upper Molars
R. or L.

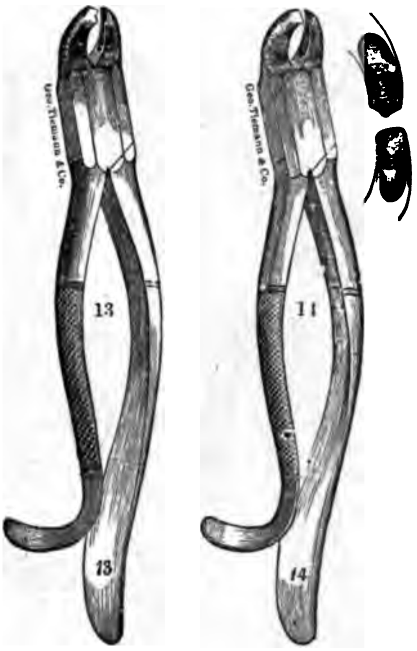


TOOTH FORCEPS.

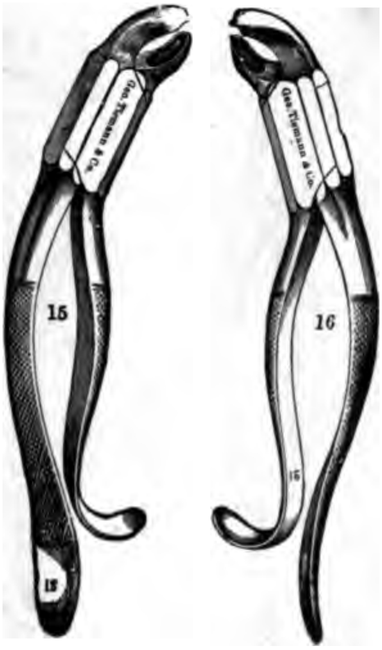
Bayonet Upper Molars.
L. R.



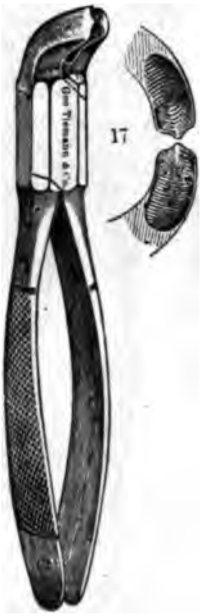
Harris' Upper Molars.
L. R.



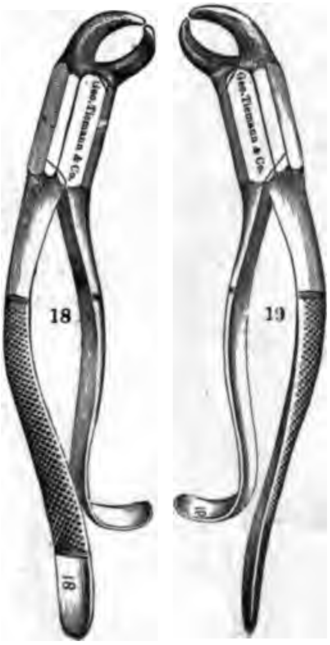
Harris' Lower Molars.
R. L.



Harris' Lower Molar.
Either side.

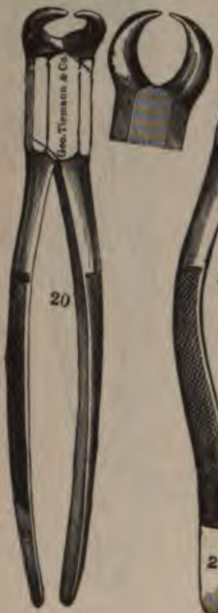


Cowhorn Lower Molars.
R. L.

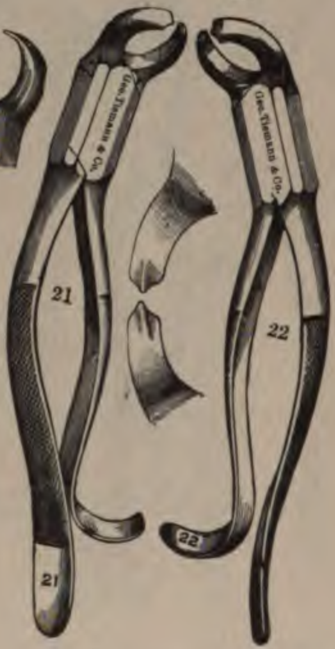


TOOTH FORCEPS.

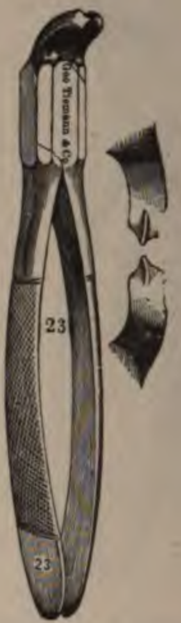
Cowhorn Molar.
Either side.



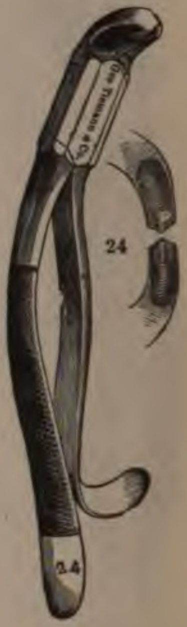
Harris' Lower Molars.
R. L.



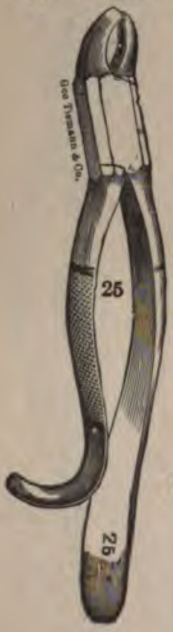
Either side.



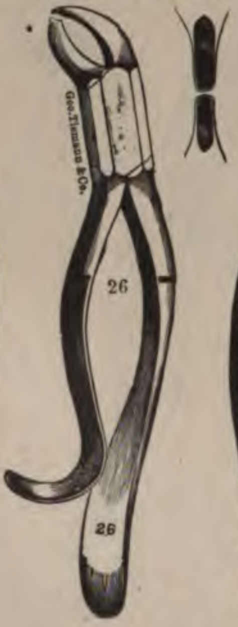
Wolverton's Lower Molar.
Either side.



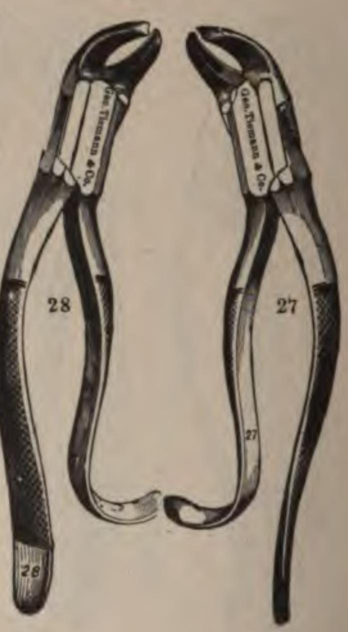
Wolverton's
Upper Bicuspids.



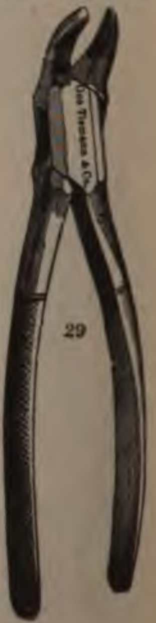
Wolverton's
Lower Bicuspids.



Wolverton's Lower Roots.
R. L.

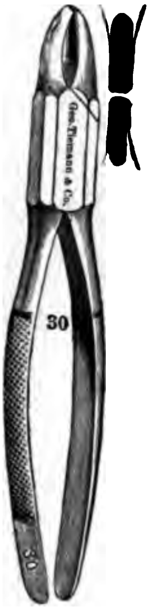


Universal Root.

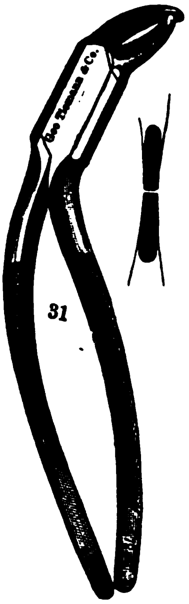


TOOTH FORCEPS.

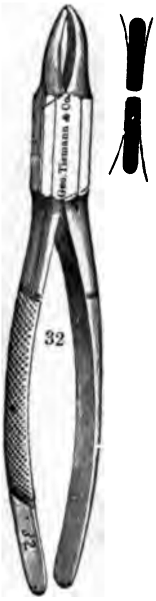
Straight Root.



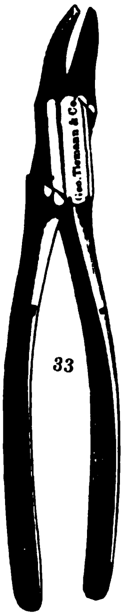
Lower Root.



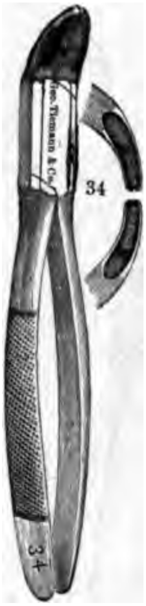
Straight Root.



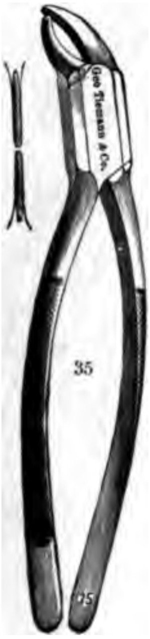
Half Curved Root.



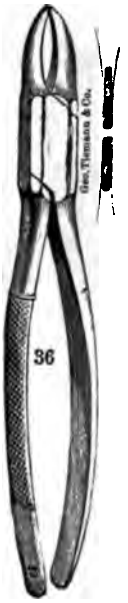
Full Curved Root.



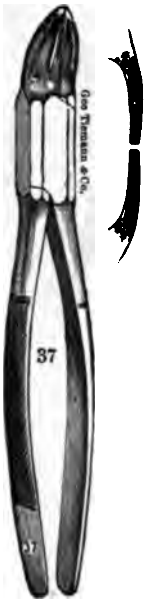
Narrow Beak Root.



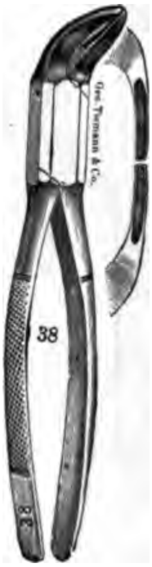
Straight Narrow Beak Root.



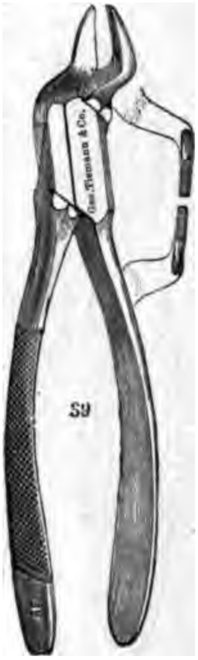
Half Curved Narrow Beak Root.



Full Curved Narrow Beak Root.

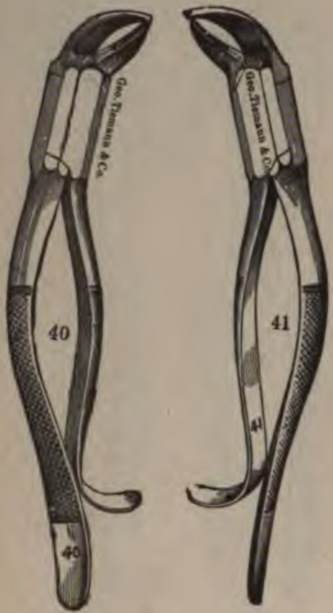


Bayonet Narrow Beak Root.

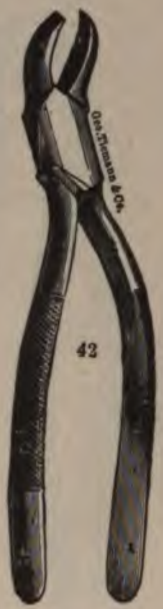


TOOTH FORCEPS.

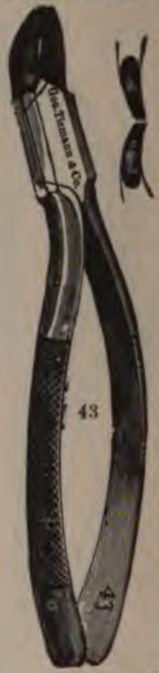
Narrow Beak Roots.
R. L.



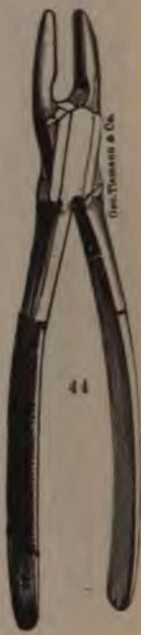
Universal.



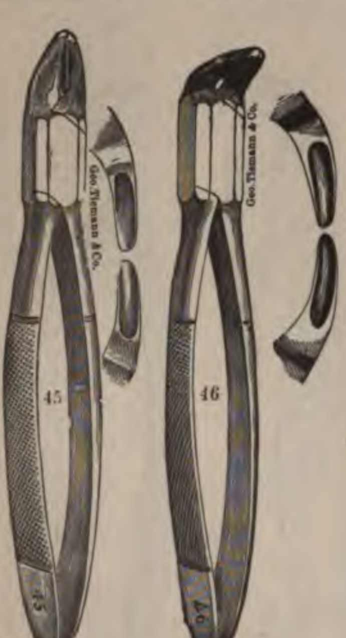
Universal Root.



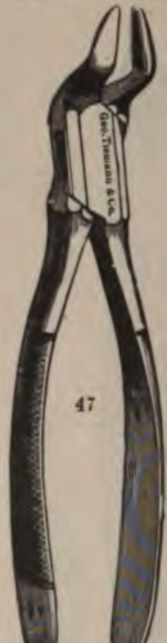
Parmly's
Straight.



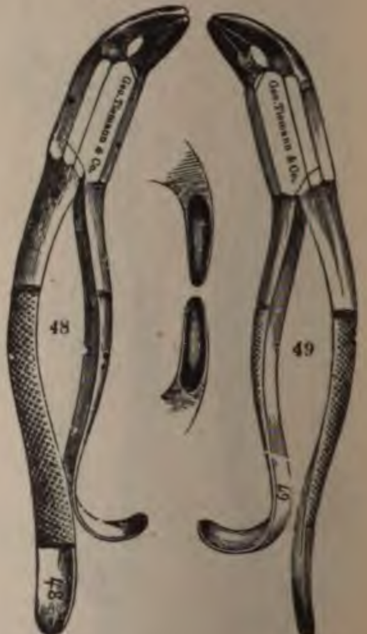
Parmly's.
Half Curved. Full Curved.



Parmly's Bayonet.



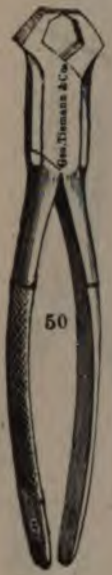
Parmly's.
L. R.



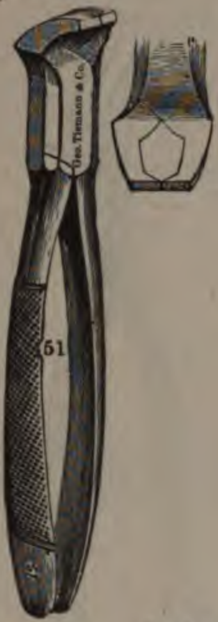
TOOTH FORCEPS.

Excising.

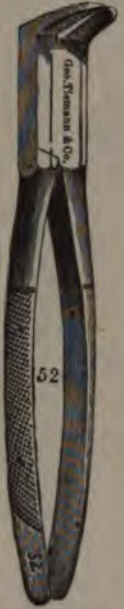
Straight.



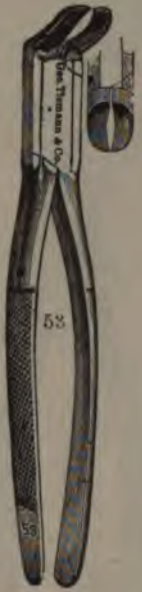
Curved.



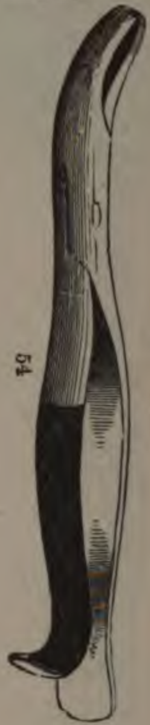
Splitting.



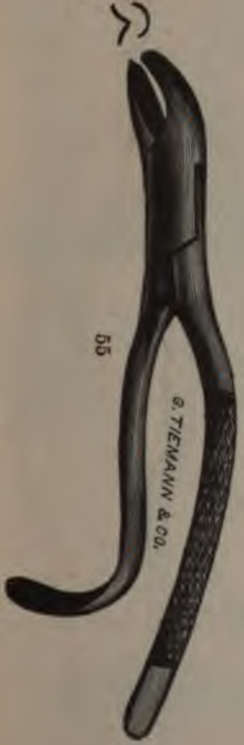
Elevating.



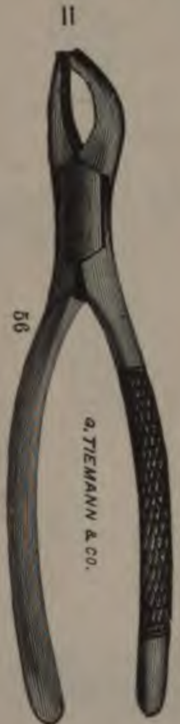
Single Jointed.



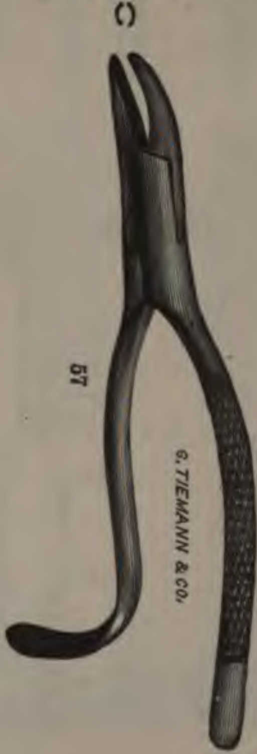
Upper Molar.



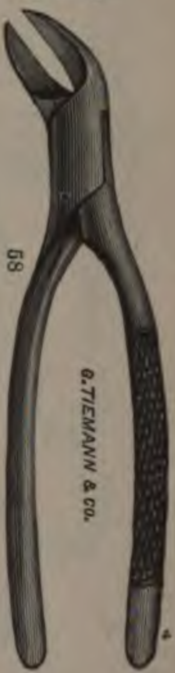
Goodwillie's
Spicula.



Root and Children.

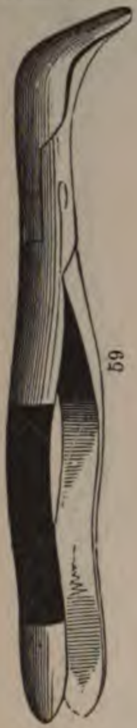


Splitting.

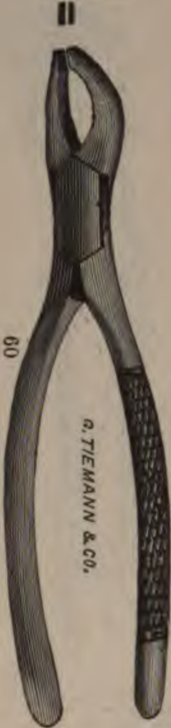


TOOTH FORCEPS.

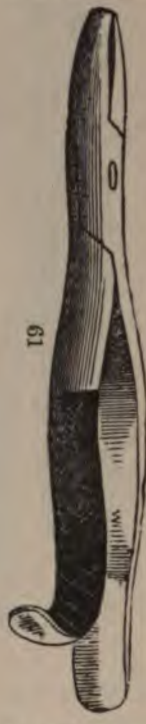
Plain Curved.



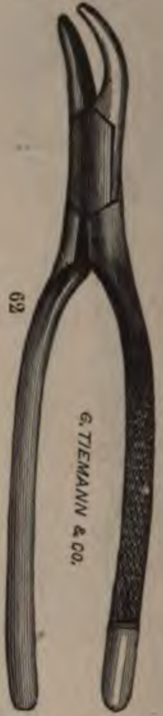
Goodwillie's Bicuspid.



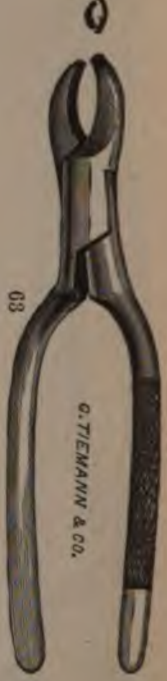
Plain Straight.



Goodwillie's Half Curved.

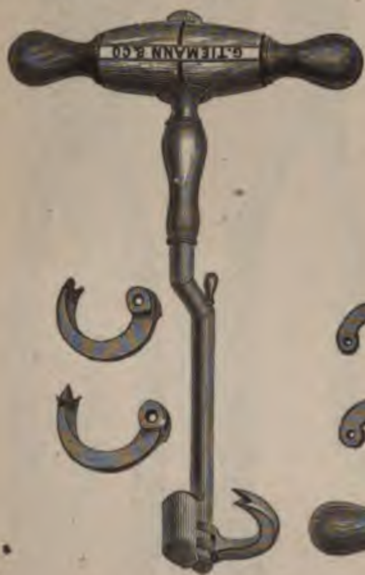


Goodwillie's Straight.

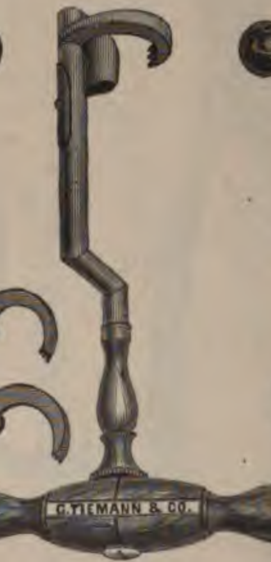


TURN KEYS.

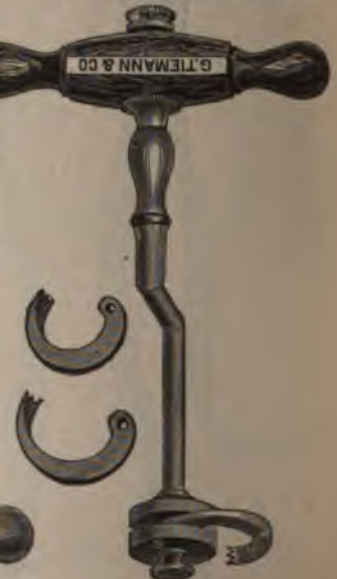
64. Spring Bolt (double).



65. Spring Bolt.

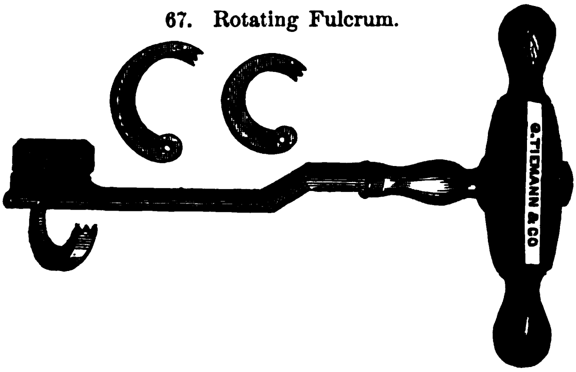

G.TIEMANN & CO.

66. Removable Fulcrum.



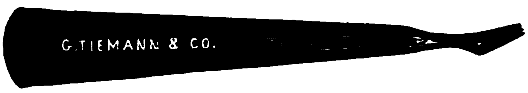
TURN KEYS.

67. Rotating Fulcrum.

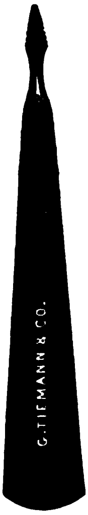


ROOT EXTRACTORS.

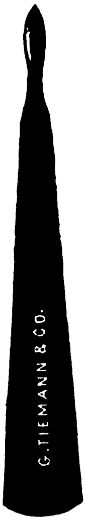
68. Stag-foot Elevator.


G. TIEMANN & CO.

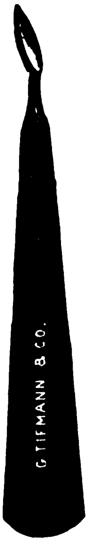
69. Screw Elevator.


G. TIEMANN & CO.

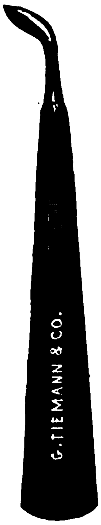
70. Root Extractor.


G. TIEMANN & CO.

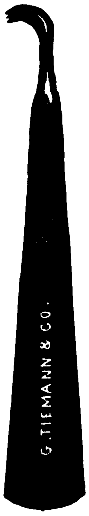
71. Root Extractor.


G. TIEMANN & CO.

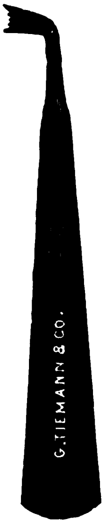
72. Gum Lancet.


G. TIEMANN & CO.

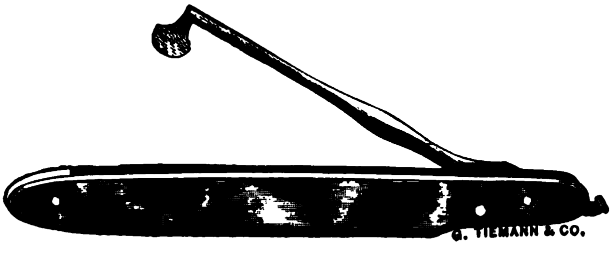
73. Curved Root Extractor.


G. TIEMANN & CO.

74. Angular Root Extractor.


G. TIEMANN & CO.

75. Gum Lancet.


G. TIEMANN & CO.

UP De GRAFF'S STAPHYLORRHAPHY CASE.

FIG. 76. Curved Bistoury.

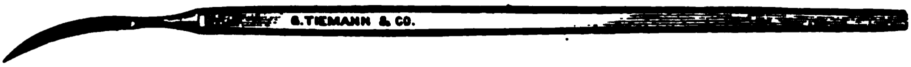


FIG. 77. Curved Needle.

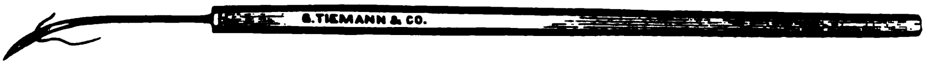


FIG. 78. Blunt Hook.

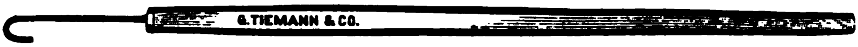
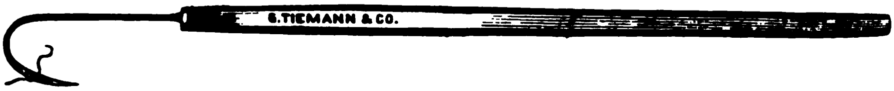


FIG. 79. Bent Needle.



The above Instruments, put up in a neat Case, $9.00.

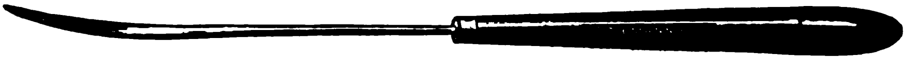
The edges of the cleft are freshened with the Bistoury, fig. 76. The Curved Needle, fig. 77, is threaded with waxed Chinese silk, and thrust through one edge of cleft, then slightly withdrawn so far as to form a loop underneath. The Blunt Hook, fig. 78, is passed through this loop, by means of which the thread is withdrawn outside the mouth, and the needle is also withdrawn. The Bent Needle, fig. 79, is then threaded with the same thread and pushed from the rear (of the opposite side of cleft) to the front ; a loop is formed in same manner as with Curved Needle, and thread withdrawn with the Blunt Hook. The process is repeated until as many sutures are introduced as seem necessary, all of which are tied.

The operation can be performed in half the time and much easier than by the plan of holding needles in needle holders.

Staphylorrhaphy and Uraniscoplastic Instruments, pages 66, 67, Part II.

DERMATOLOGICAL.

FIG. 80. Nævus Needle.



Blowpipe, to heat Needle, page 100, Part III.

DERMATOLOGICAL.

FIG. 81. Piffard's Comedone Extractor.

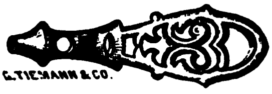


FIG. 82. Piffard's Irido-Platinum Needle.

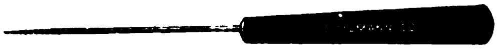


FIG. 83. Piffard's Milium Needle.

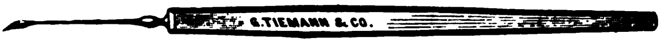


FIG. 84. Piffard's Scarifying Spud.

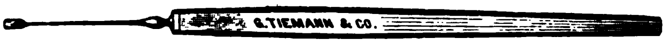


FIG. 85. Piffard's Epilating Forceps.

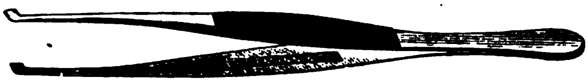


FIG. 86. Piffard's Grappling Forceps.

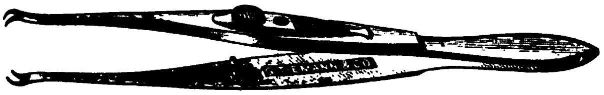


FIG. 87. Skin Grafting Scissors.

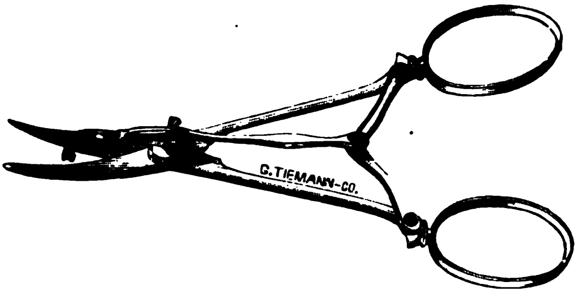


FIG. 88. Piffard's Cutisector

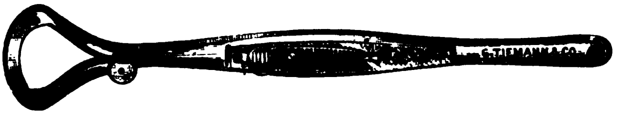


FIG. 89. Piffard's Sharp Spoon.

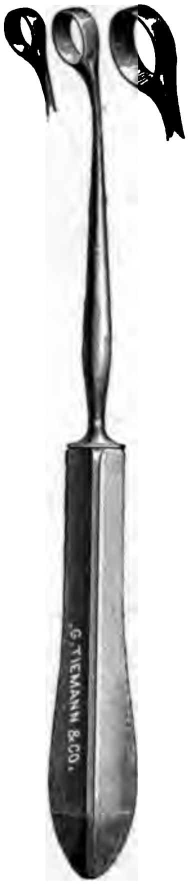
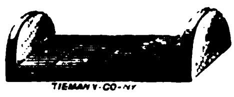


FIG. 90. Hess' Glass Pleximeter. For observing the skin under pressure.



Henry's Depilating Forceps, page 46, Part III.

Piffard's Cutisector,	fig. 293, Part II.	Microscopic Instruments,	page 99, Part I.
Platina Caustic Cup,	fig. 309. Part III.	Counter Irritants,	page 63, Part I.
Fine Scissors,	figs. 110, 111, Part II.	Vaccinating Instruments,	page 63, Part I.
Scalpels,	pages 6, 43, Part I.	Hypodermic Syringes,	page 79, Part I.

NAIL AND CORN INSTRUMENTS.

FIG. 91. Spring for Inverted Nails.

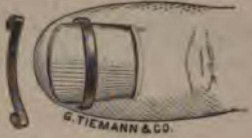

G. TIEMANN & CO.

FIG. 92. Nail Nippers.

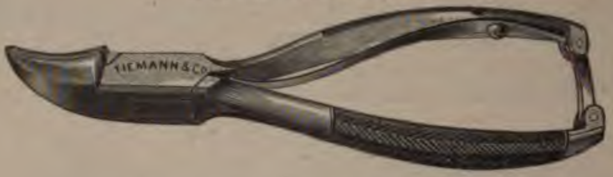


FIG. 93. Nail Extracting Forceps.

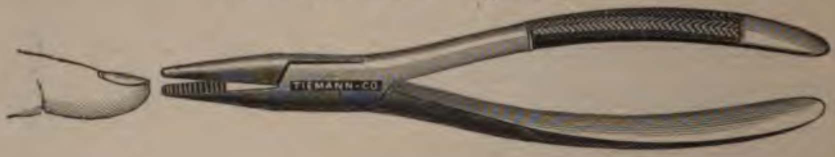


FIG. 94. Corn Knife and File.

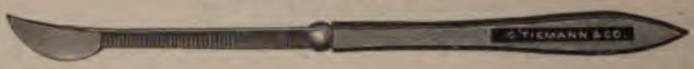

G. TIEMANN & CO.

FIG. 95. Van Buren's Sequestrum Forceps.

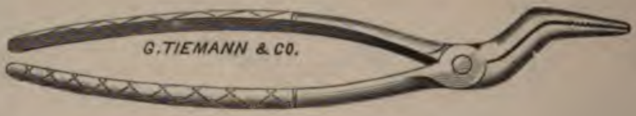

G. TIEMANN & CO.

FIG. 96. Nail Cleaner and File.

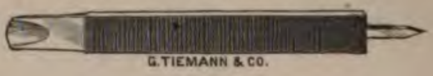

G. TIEMANN & CO.

FIG. 97. Pocket Case Scalpel, for Corns.

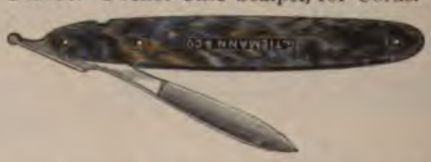

G. TIEMANN & CO.

FIG. 98. Dissecting Scalpel, for Corns.

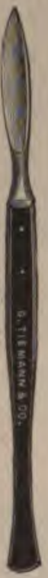

G. TIEMANN & CO.

FIG. 99. Splinter Forceps.

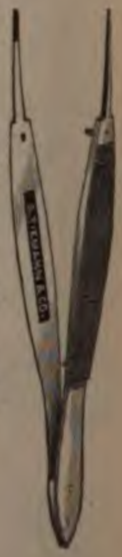
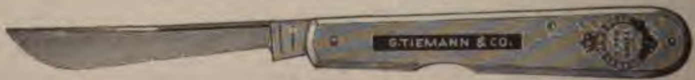

G. TIEMANN & CO.

FIG. 100. Corn Knife (spring handle).


G. TIEMANN & CO.

SUNDRIES.

FIG. 101. Emmett's Counter pressure Hook.

FIG. 102. Emmett's Enucleator.

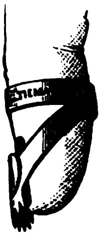


FIG. 103. Emmett's Needle Forceps.

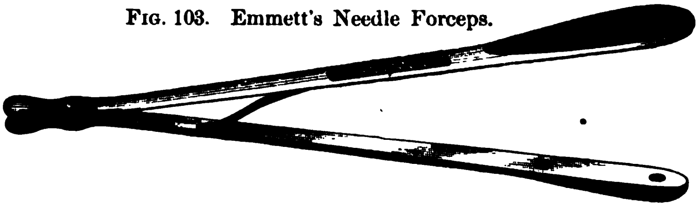


FIG. 104. Emmett's Double Tenaculum.

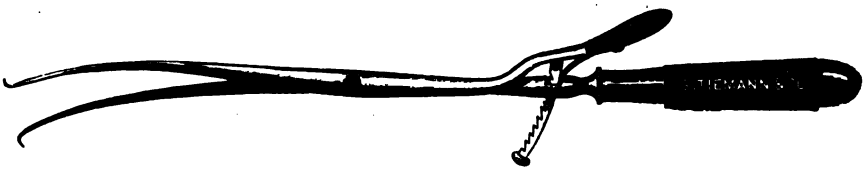


FIG. 105. Emmett's Curette Forceps.

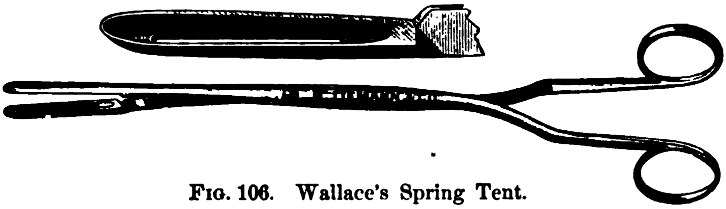


FIG. 106. Wallace's Spring Tent.

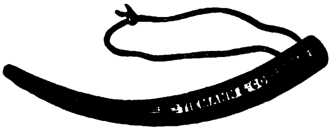
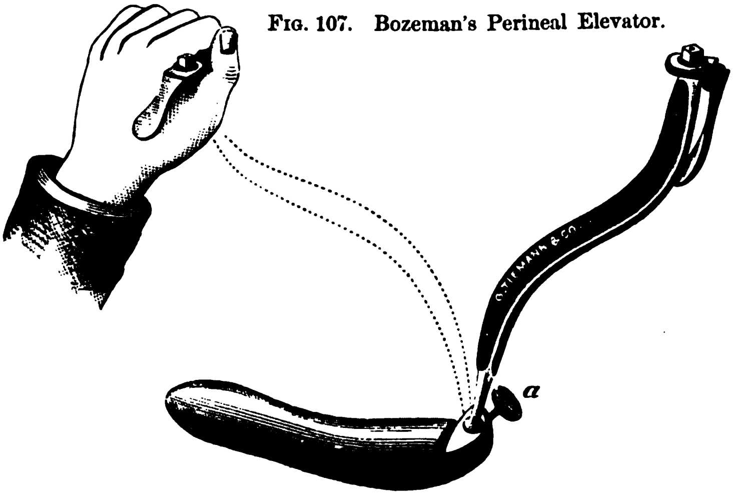


FIG. 107. Bozeman's Perineal Elevator.



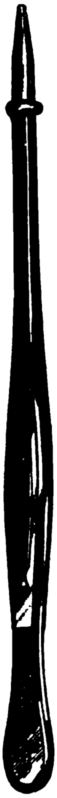


FIG. 108. Uterine Dressing Forceps (slide catch).

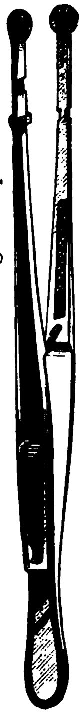


FIG. 109. Emmett's Twisting Forceps.

SUNDRIES.

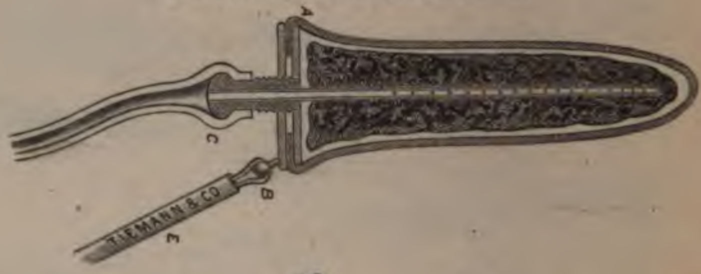


Fig. 110. Emmett's Sponge Dilator.

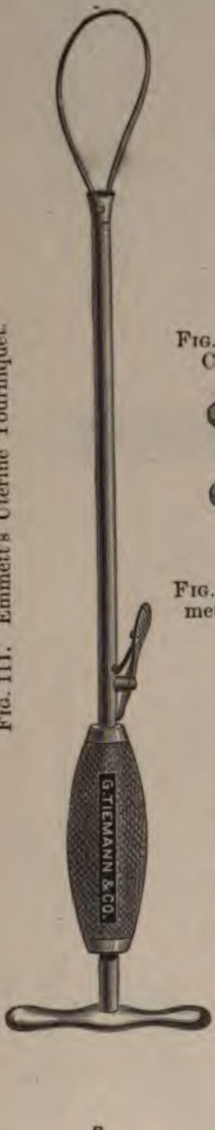


Fig. 111. Emmett's Uterine Tourniquet.

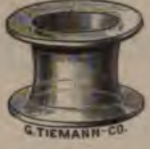


Fig. 112. Emmett's Cystitis Eyelet.

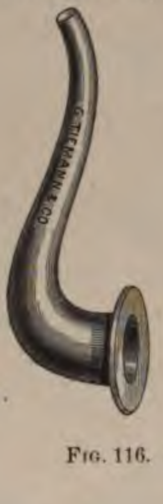


Fig. 113. Bache Emmett's Fistula Tube.

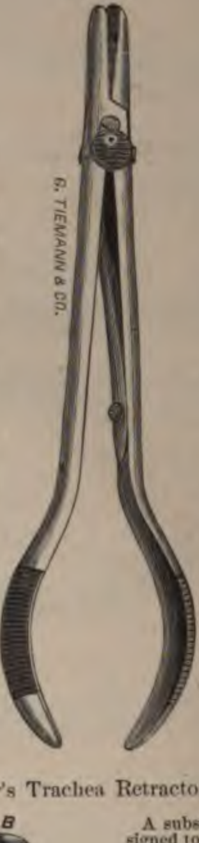


Fig. 114. Stimson's Needle and Cutting Forceps.

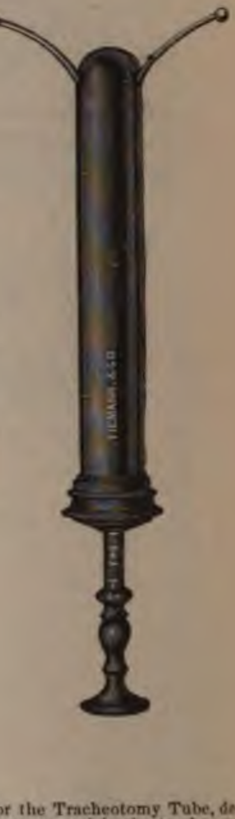


Fig. 115. King's Pelvimeter.

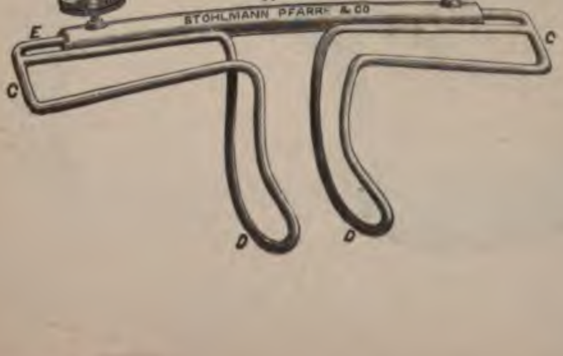


Fig. 116. Minor's Trachea Retractors.

A substitute for the Tracheotomy Tube, designed to hold open a wound in the trachea, so that the air can pass in and out of the windpipe through the same. *A* is a hollow rod, slightly curved, having a screw at each extremity, *B B*, to set the retractors, *D*, *D*, which are then secured in the desired position by tapes adjusted at *C*, *C*.

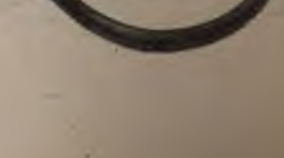


Fig. 117. Brown's Pessary.

SUPPLEMENT.

ADDITIONS TO THE ARMAMENTARIUM CHIRURGICUM,

NAMES OF INVENTORS,
AND
CHRONOLOGICAL RECORD OF PUBLICATION.

THE METRIC SYSTEM.

Certain French scientists of the last century, in order to establish a universal cosmopolitan measure, proposed to base our conceptions of size, weight and money on the well-known and beautiful Decimal System of numbers—this being understood by all men alike, however different in nationality or language.

The terms applied to the length-unit, "Metre," and to the weight-unit, "Gramme," were taken from the Greek language. The names expressive of *fractions* of the above, are formed by combination with the following Latin words:

Latin.			
Decem, ten,	Decimetre, equal to	0.1	Metre.
Centum, hundred,	Centimetre, "	0.01	"
Mille, thousand,	Millimetre, "	0.001	"

The terms applied to the upper divisions, expressing certain pluralities of the same, are formed of synonymous words taken from the Greek.

Greek.			
δεχα, ten,	Decametre, equal to	10	Metres.
έχατον, hundred,	Hectometre, "	100	"
χιλιοι, thousand,	Kilometre, "	1,000	"
μύριοι, ten thousand,	Myriametre, "	10,000	"

Gramme, the *weight* measure, is divided into—

Deci-	Centi-	Milli-gramme.
Deca-	Hecto-	Kilo-gramme.

Litre, the *capacity* measure, is divided into—

Deci-	Centi-	Milli-litre.
Deca-	Hecto-	Kilo-litre.

Arranged into a Table it reads thus:

LENGTH.

10 Millimetres	make	1 Centimetre.
10 Centimetres	"	1 Decimetre.
10 Decimetres	"	1 Metre, equal to 39.368 American inches.
10 Metres	"	1 Decametre.
10 Decametres	"	1 Hectometre.
10 Hectometres	"	1 Kilometre.
10 Kilometres	"	1 Myriametre.

WEIGHT.

10 Milligrammes	make	1 Centigramme.
10 Centigrammes	"	1 Decigramme.
10 Decigrammes	"	1 Gramme, equal to 15.433 grains Troy.
10 Grammes	"	1 Decagramme.
10 Decagrammes	"	1 Hectogramme.
10 Hectogrammes	"	1 Kilogramme.
10 Kilogrammes	"	1 Myriagramme.

CAPACITY.

10 Millilitres	make	1 Centilitre.
10 Centilitres	"	1 Decilitre.
10 Decilitres	"	1 Litre, equal to 2.113 pints American.
10 Litres	"	1 Decalitre.
10 Decalitres	"	1 Hectolitre.

WEIGHT OF WATER

AT MAXIMUM DENSITY.

Millier (or Tonneau)........	1,000,000	Grammes,	equal to	1	Cubic Metre.
Quintal........................	100,000	"	"	1	Hectolitre.
Myriagramme..............	10,000	"	"	10	Litres.
Kilogramme (or Kilo)......	1,000	"	"	1	Litre.
Hectogramme..............	100	"	"	1	Decilitre.
Decagramme..............	10	"	"	10	Cubic Centimetres.
Gramme....................	1	"	"	1	" "
Decigramme...............	0.1	"	"	0.1	" "
Centigramme..............	0.01	"	"	10	" Millimetres.
Milligramme...............	0.001	"	"	1	" "

Square and Cubic Measures are deduced by arithmetic rules: A Square Decametre is called "Are"; a Cubic Metre is called "Stere."

Geo. Tiemann & Co.'s Surgical Instruments.

No. 67 Chatham Street.

BRANCH STORE, NO. 107 EAST 28TH STREET,

NEW YORK.

Fig. 1.—OBSTETRICAL FORCEPS.

BY W. H. NEWMAN, M.D., Denver, Colorado, April 7, 1875.

Price, $7.00.

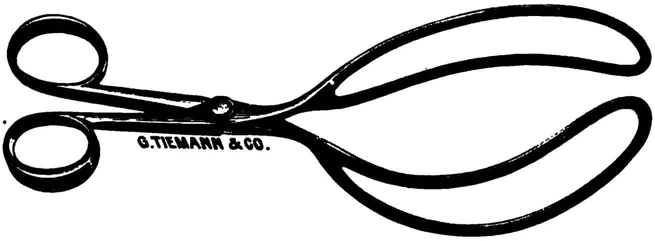


Fig. 2.—URETHROTOME.

BY E. A. BANKS, M.D., New York, April, 1875.

Price, $20.00.

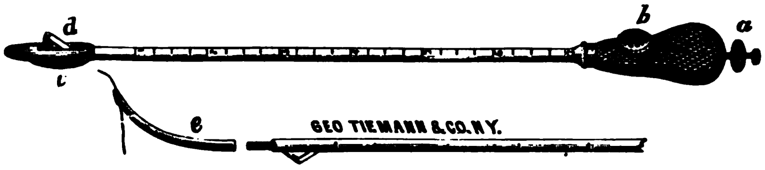


Fig. 3.—THE NEW OBSTETRIC FORCEPS.

BY EDWARD WARREN SAWYER, M.D.

Lecturer on Obstetrics and the Diseases of Children, Rush Medical College, Chicago, February 1st, 1876.

Price, $7.00.

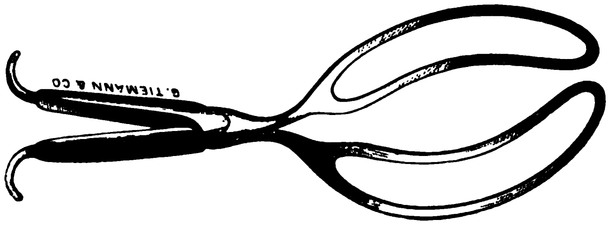


Fig. 4.—A DILATING URETHROTOME.

By James Andrew Milne, M.D., Oswego, N. Y.

Medical Record, February 19, 1876.

Price, $17.00.

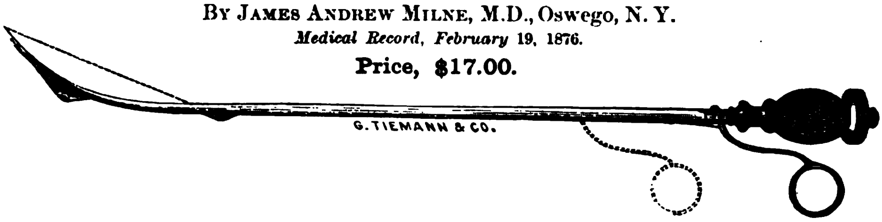


Fig. 5.—A NEW SPRAY CAUTERY.

By Jarvis S. Wight, M.D.

Medical Society of the County of Kings. Stated Meeting, April 18, 1876.

Price, $11.00.

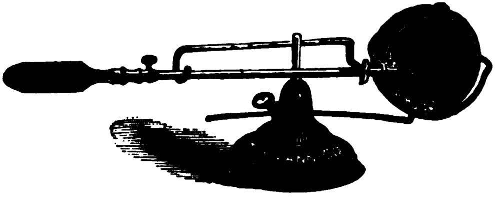


Fig. 6.—FORCEPS FOR THE EXTRACTION OF ARROW HEADS.

By J. H. Bill, M.D., U.S.A.

Medical Record, April 8, 1876.

Price, $2.50.

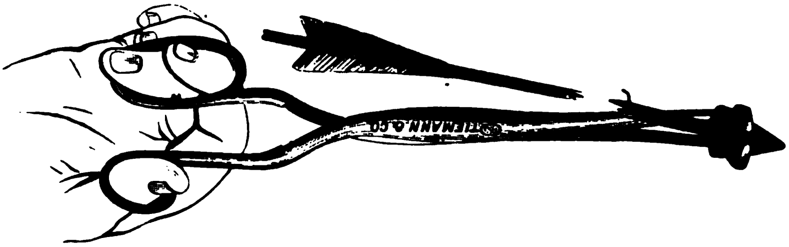


Fig. 7.—DR. H. T. HANKS' TENACULUM FORCEPS.

American Journal of Obstetrics, August 1876. *Transactions of the New York Obstetrical Society.*

Price, $3.00.

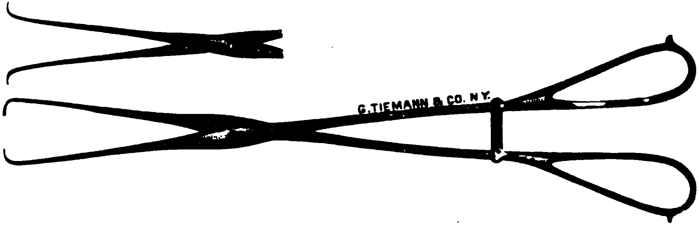
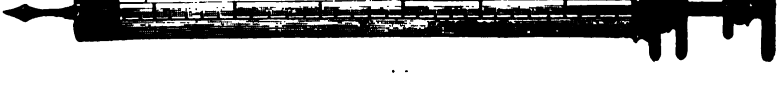


Fig. 8.—UTERINE LEECH AND ASPIRATOR.

By William W. Reese, M.D., Brooklyn, N. Y.

Medical Record, September 9, 1876.

Price, $4.50.



KNIFE AND SAWS FOR SUBCUTANEOUS SECTION OF BONE.

By DR. ADAMS, OF LONDON, ENGLAND. September 19, 1876.

Fig. 9.—ADAMS' SUBCUTANEOUS SECTION KNIFE.

Price, $1.50.

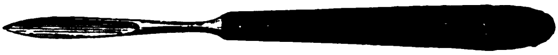


Fig. 10.—ADAMS' LARGE SAW.

Price, $4.00.

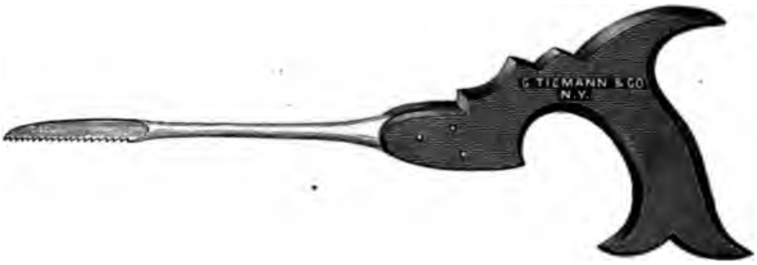


Fig. 11.—ADAMS' SMALL SAW.

Price, $3.50.

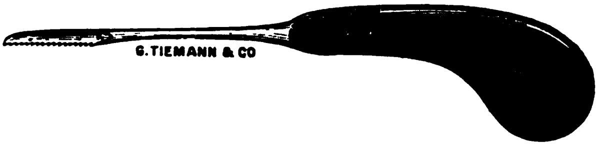


Fig. 12.—ADAMS' RHINOPLASTOS.

For straightening the bones of the Septum Narium deformed by accident.

Price, $3.00.

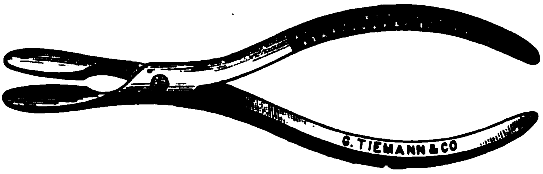


Fig. 13.—NASAL DOUCHE. Fig. 14.—AUTO-INSUFFLATOR.

By HORATIO BRIDGE, M.D., New York, October, 1876.

Fig. 13.—Price, 60 cents.

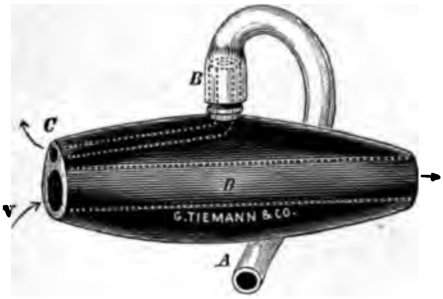


Fig. 14.—Price, 75 cents.

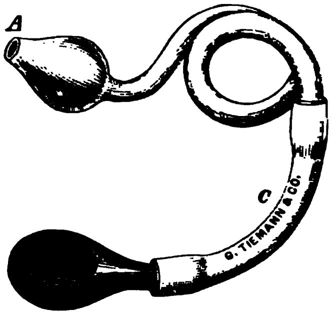


Fig. 15.—A NEW COMBINATION SPECULUM.

By W. D. SCHUYLER, M.D.

New York Medical Journal, October, 1876.

Price, $12.00.

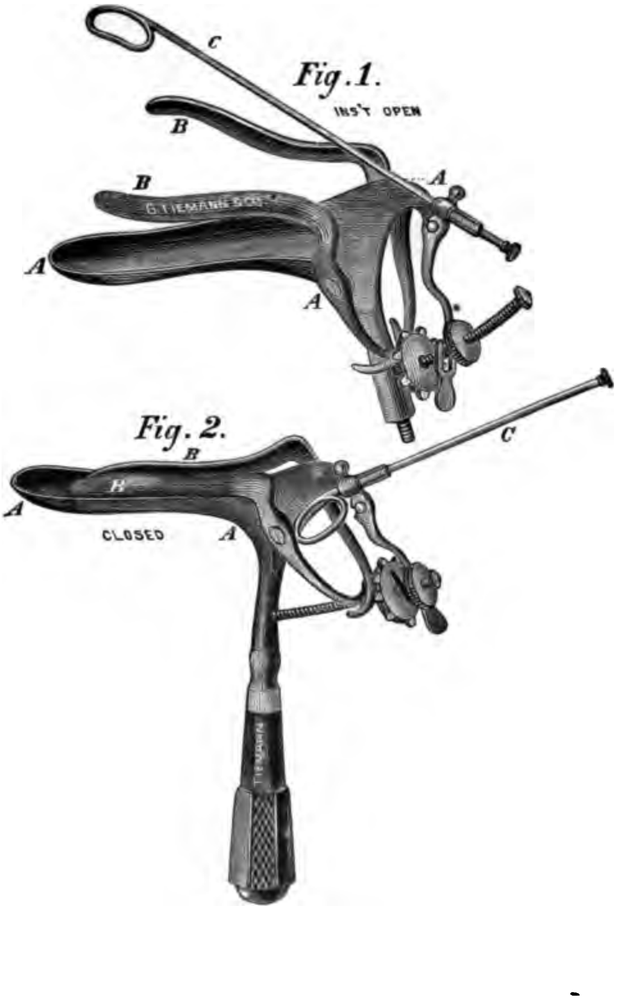


Fig. 16.—TWO NEW PESSARIES, 1, 2.

By A. T. WOODWARD, M.D., Brandon, Vt.

New York Medical Journal, October, 1876.

1.—Price, $1.25.

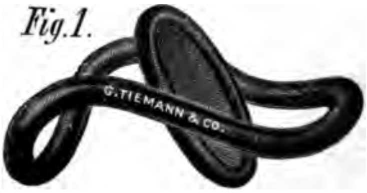


Fig.1.
G. TIEMANN & CO.

2.—Price, $1.25.

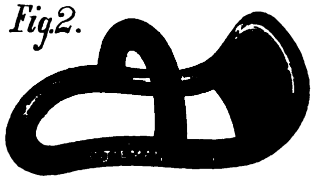


Fig. 17.—NEW ECRASEUR.

By J. H. THOMPSON, M.D., Washington, D. C.

Price, $25.00.

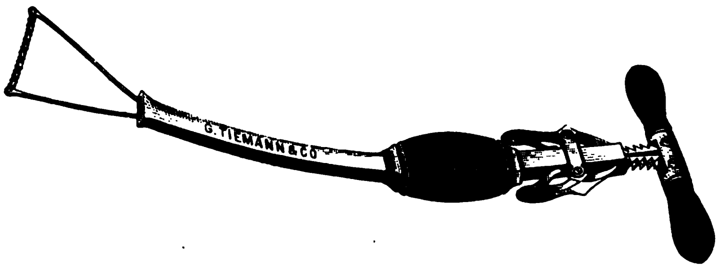


Fig. 18.—NEW BRISTLE PROBANG.

By T. A. STANFORD, M. D., Columbus, Ga.

Price, $2.50.

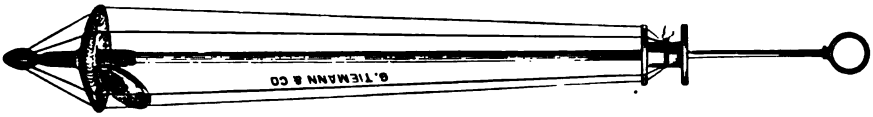


Fig. 19.—AUTOMATIC SUTURE.

By A. H. HOFF, M.D., U. S. A.

Price, $5.50.

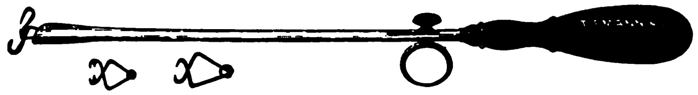


Fig. 20.—A NEW NEEDLE HOLDER.

By DR. ANATOL DE GAINE, St. Petersburg, Russia, January 17, 1877.

Price, $4.00.

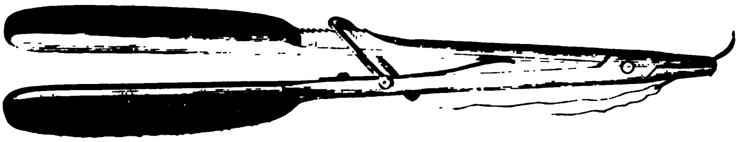


Fig. 21.—A NEW TRACHEOTOME.

By H. T. HANKS, M.D., New York.

American Journal of Obstetrics, January, 1877.

Price, $9.00.

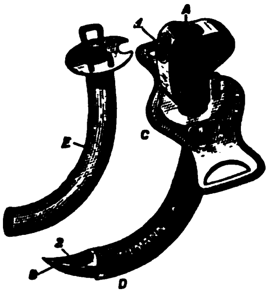


Fig. 22.—A NEW ATOMIZER FOR USE IN ANTISEPTIC SURGERY.

By H. T. HANKS, M.D., New York.

Medical Record, January 13, 1877.

Price, $15.00.

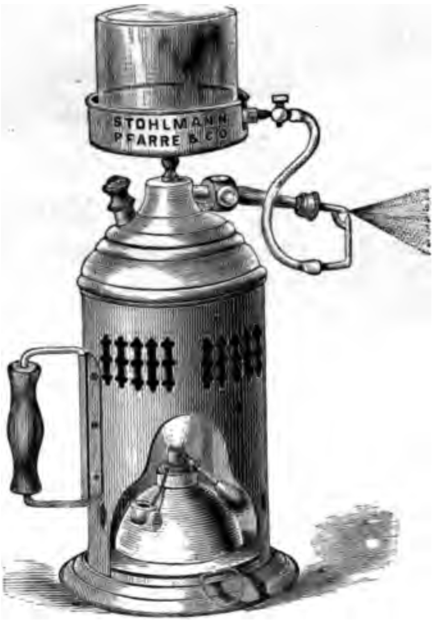


Fig. 23.—INSUFFLATOR FOR TREATMENT OF CATARRHAL INFLAMMATION OF THE MIDDLE EAR.

By SAMUEL SEXTON, M.D., New York.

Medical Record, January 13, 1877.

Price, $2.00.

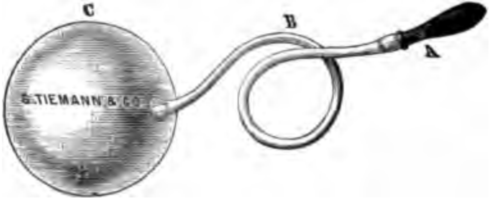


Fig. 24.—A NEW SAW. (Patent.)

By F. A. STOHLMANN, (TIEMANN & Co.,) New York.

New Remedies, February, 1877.

Price, $6.00.

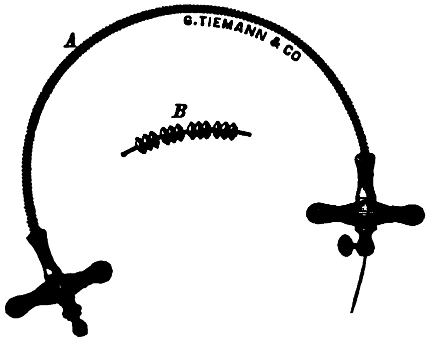


Fig. 25.—ADJUSTABLE VECTIS.

By THOMAS RYERSON, Newton, N. J. February 17, 1877.

Price, $5.00.

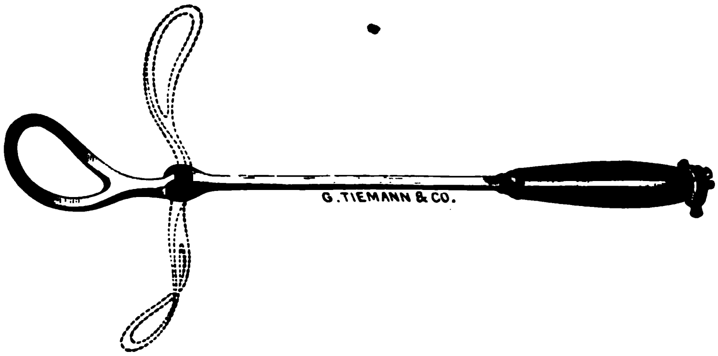


Fig. 26.—A NEW RECTAL DILATOR AND EXPLORER.

By PHILIP S. WALES, M. D., Medical Inspector U. S. Navy.

New York Medical Record, February 24, 1877.

Price, $1.50 to $3.50 each. Syringe and Stopcock extra.

Since the publication of this paper in the *N. Y. Medical Record,* these instruments have been used with the most gratifying success in other cases. Messrs. G. TIEMANN & Co. have seconded my efforts in perfecting these dilators, and as they now manufacture them, little room is left for further improvement. Indeed, their field of utility will be greatly widened, as the safety and painlessness of introduction will enable many of the inflammatory diseases of the pelvic and abdominal organs to be treated locally with hot water, medicated solutions, or ointments of any composition that may be desired.

WALES' RECTAL DILATOR AND EXPLORER.

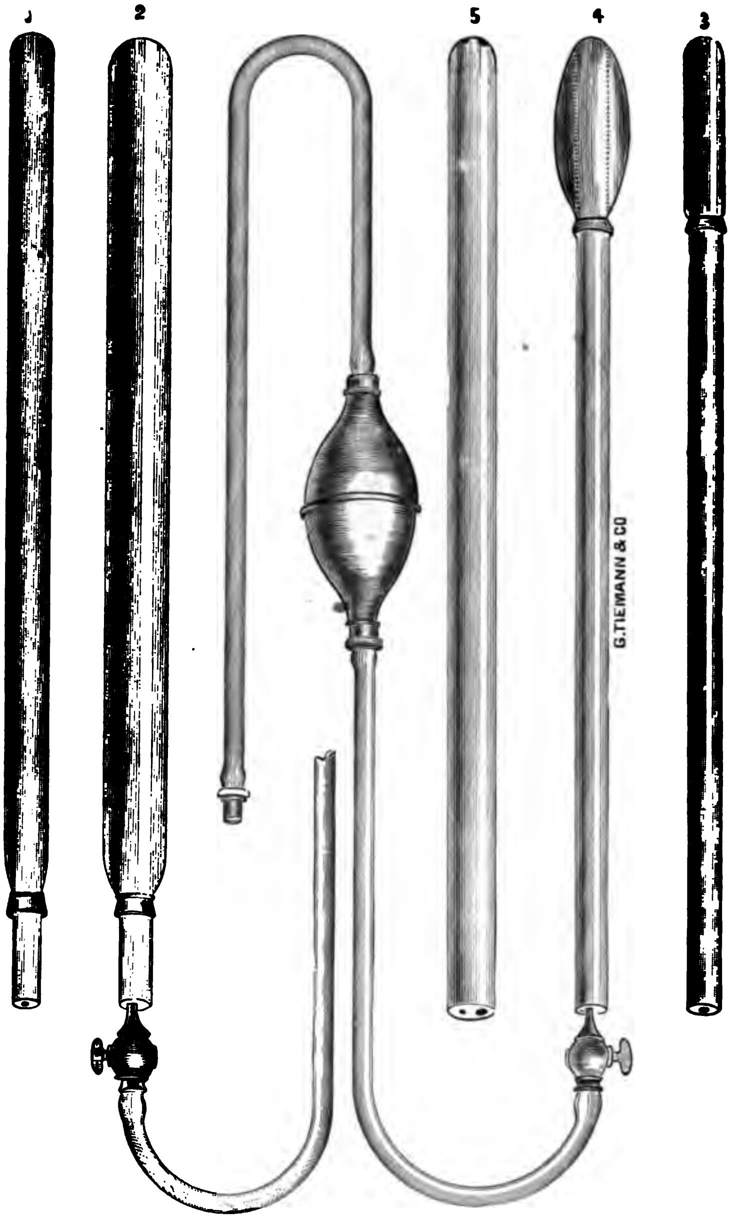


Fig. 1.—Dilator unexpanded. Fig. 2.—Dilator expanded.

Fig. 3.—Explorer unexpanded. Fig. 4.—Explorer expanded.

Fig. 5.—Irrigator.

Fig. 27.—SERRATED SCOOP FOR THE DETACHMENT OF SESSILE UTERINE FIBROIDS.

By T. GAILLARD THOMAS, M. D., New York.

New York Medical Journal, March, 1877.

Price, $3.50.

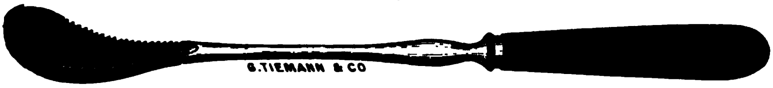


Fig. 28.—GEORGE TIEMANN & CO.'S NEW PATENT BENT SELF-REGISTERING CLINICAL THERMOMETER.

New Remedies, March, 1877.

Price, in Case, $3.50.

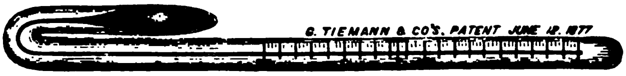


Fig. 29.—A NEW WIRE TWISTER.

By SIMON FITCH, M. D. Edin, St. John, New Brunswick, Canada. April 11, 1877.

Price, $4.00.

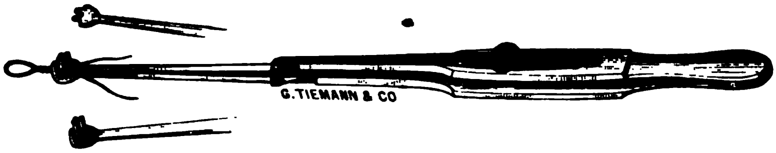


Fig. 30.—A NEW PROSTATIC GUIDE.

By F. N. OTIS, M. D., New York.

Medical Record, April 21, 1877.

Price, $1.25.

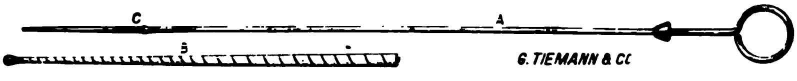


Fig. 31.—UNISON RESONANCE IN AUSCULTATION. A NEW RESONATOR.

By EDGAR HOLDEN, M. D., Newark, N. J.

Medical Record, April 28, 1877.

Improved. Price, $2.50.

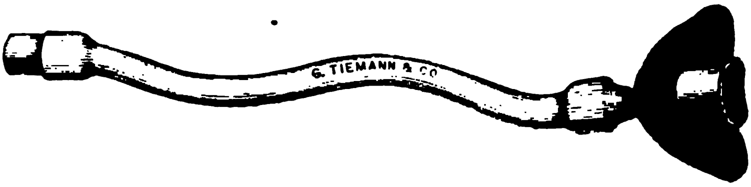


Fig. 32.—THE ERRORS OF REFRACTION DEMONSTRATED BY A NEW AND ORIGINAL MODEL.

By F. A. Munson, M. D.

New York Medical Journal, May, 1877.

Price, $9.00.

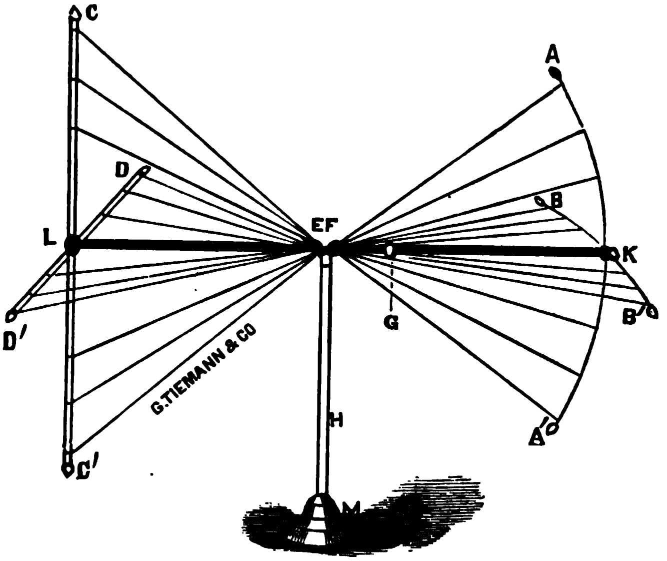


Fig. 33.—A NEW STAPHYLORRHAPHY INSTRUMENT.

By D. Prince, M. D., Jacksonville, Ill.

Price, $10.00.

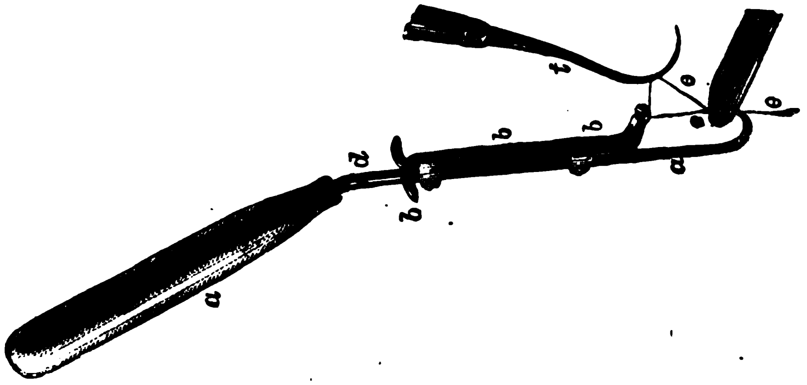


Fig. 34.—A NEW DOUBLE-BLADED LITHOTOME.

By Jo. C. Hutchison, M. D.

Proceedings Med. Soc. of the County of Kings, July, 1877.

Price, $8.00.

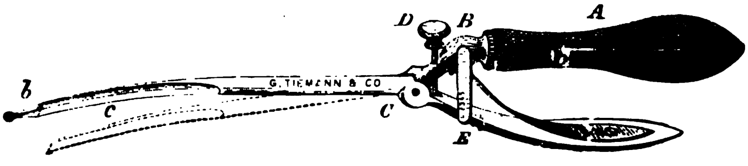


Fig. 35.—A NEW HERNIATOME.

By OSCAR H. ALLIS, M. D.

Philadelphia Medical Times, July, 1877.

Price, $7.00.

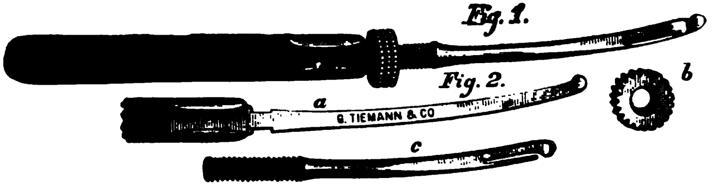
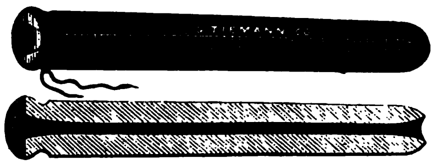


Fig. 36.—SUSSDORFF'S TUPELO DILATORS.

A New Material for Dilatation of the Cervix Uteri, and for other purposes.

Medical Record, July 14, 1877.

Hollow, price per doz., $3.00.



Solid, price, per doz., $2.00.

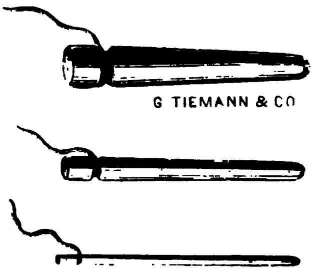
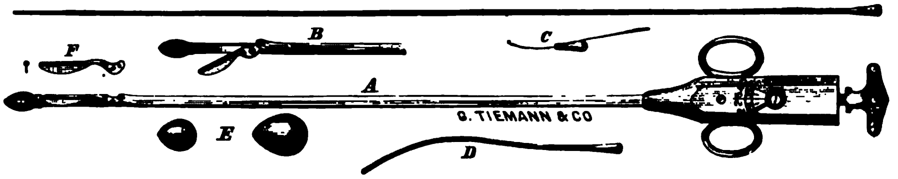


Fig. 37.—A DILATING URETHROTOME.

By R. A. KINLOCH, M. D.

American Journal of the Medical Sciences, July, 1877.

Price, $25.00.



A. Instrument entire, with small bulb attachment. *B.* Section, showing the blade projected and ready for use. *C.* Tunneled end attachment, with whalebone guide. *D.* Probed end or short elastic guide. *E.* Bulbous attachments, of different sizes. *F.* Blade, detached to show formation, shoulder, &c. *G.* Long elastic guide, bougie attachment.

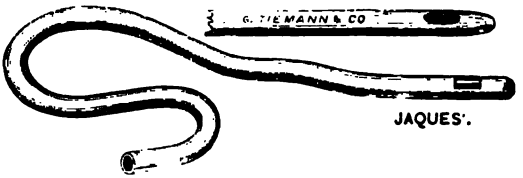
Fig. 38.—TIEMANN & CO.'S SOFT RUBBER CATHETER (Velvet Eye).

Article by JOSEPH W. THOMPSON, M.D., Paducah, Ky.

American Practitioner, August, 1877.

Patented June 12, 1877.

Price, 75 cents.



Sir Henry Thompson says: "If, after twenty-four hours of agony, relief follows your dextrous use of the catheter, and the two or three pints which the patient was unable to void are withdrawn by your hand, he tells you that he is in heaven—a common expression with such patients; and he will never doubt for a moment that you were the author of his translations." I have repeatedly been more warmly and gratefully thanked by the patient and family for relieving, by the use of soft catheters, the retentions of urine, than for any other professional service.

These catheters are especially suited to the wants of country practitioners, where in sparsely settled sections they are frequently unable to see the patient suffering with retention from prostatic obstruction, and atony from over-distention or paralysis of bladder, more than once in twenty-four hours, when in that length of time the operation should have been repeated three or four times. You can easily instruct these patients to relieve themselves with one of them. Thus the great advantage to that class of practitioners is evident.

Fig. 39.—A NEW ATOMIZER AND EYE DOUCHE.

By F. A. BURRALL, M. D.

Medical Record, August 25, 1877

Price, $1.75.

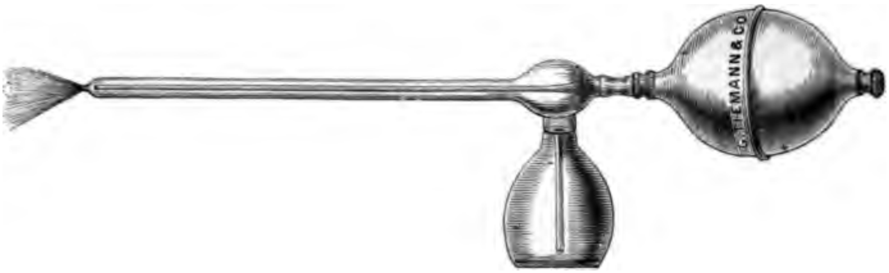


Fig. 40.—A MODIFICATION OF THE SIMS' SPECULUM.

By BLENCOWE E. FRYER, M. D., Surgeon U. S. A.

Medical Record, September 22, 1877

Price, $2.00.

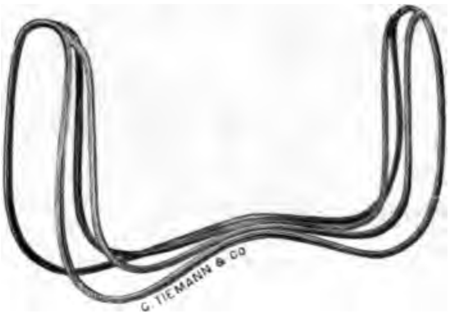
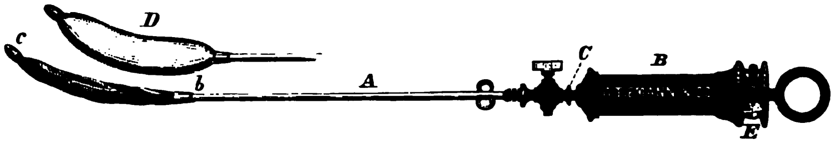


Fig. 41.—A NEW DILATOR.

By J. A. STEURER, M. D., New York.

Medical Record, September 22, 1877.

Price, $8.00.



THE COLD SOUND. (Psychrophor.)

A New Instrument for Treating Pollutions, Spermatorrhœa, and Chronic Gonorrhœa.

By DR. WINTERNITZ, Vienna.

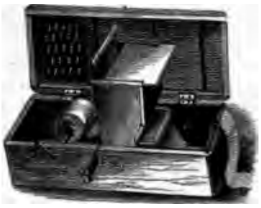
Medical Record, September 22, 1877.

Price, in Silver, $4.00. Price in Soft Rubber, $2.50.

A double current Catheter without eyes, the two canals communicating near the point of the instrument. It is introduced into the urethra until its point has passed the pars prostatica and it is then attached by rubber tubing to a reservoir containing water of the desired temperature. On turning the stopcock, the water flows into one canal and out through the other. In this way the caput callinaginis and the entire mucous membrane are exposed to the mechanical action of pressure and the *sedative action of cold.*

Fig. 42.—A NEW DEVISE FOR SPREADING PLASTER OF PARIS AND OTHER SUBSTANCES UPON BANDAGES.

By Dr. GREENE.

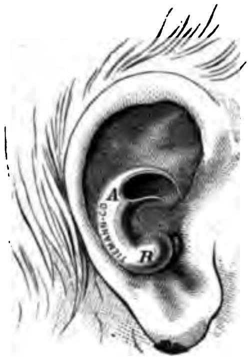


Medical Record, October 13, 1877.

Price, $5.00.

The apparatus is constructed to simply roll bandages, or, if desired, to apply silicate of soda, dextrine or plaster simultaneously with the winding process. It is enclosed in a black walnut box, in which the materials are confined, therefore creating no dust.

Fig. 43.—APPARITOR AURIS. A POWERFUL AID TO THE DEAF IN HEARING.



New Remedies, October, 1877.

Price, $6.00 a pair, in Case.

They are sold in pairs, one for each ear, and are so shaped that they can be worn entirely within the concha, being almost unobservable on account of their close fit and flesh color.

The advantage of this instrument over the well-known cornet consists in having the canal elongated and overbridged, so that sound entering the apperture (*A*) cannot diffuse, but is conducted within the tunnel through the meatus auditorius (*B*) to the tympanum.

Fig. 44.—A NEW OBSTETRIC FORCEPS.

By M. TARNIER, M. D., France.

Price, $24.00.

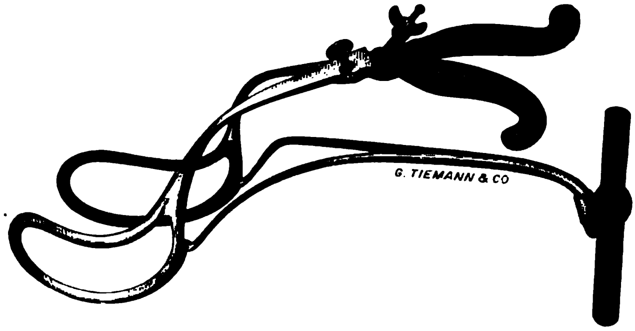


Fig. 45.—MODIFICATION OF A CERVIX UTERI DILATOR.

By JOHN BALL, M. D., Brooklyn, N. Y.

Price, $10.00.

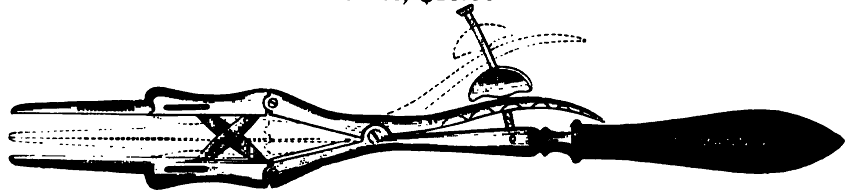


Fig. 46.—A NEW TENACULUM-NEEDLE, WIRE-TWISTER AND NEW MATERIAL FOR SUTURES (Hard Ash).

By C. J. Cleborne, M. D., Surgeon U. S. Navy.

Medical Record, October 13, 1877.

Price, $7.00.

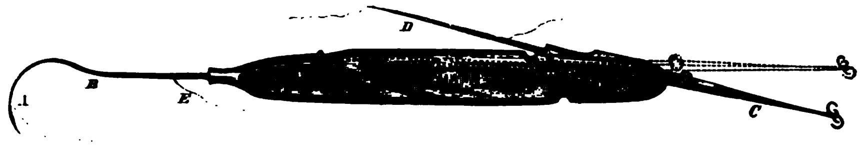
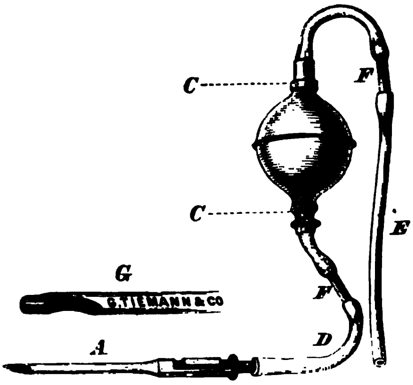


Fig. 47.—A HANDY ASPIRATOR.

By Simon Fitch, M. D. Edin, St. John, New Brunswick, Canada.

New York Medical Journal, November, 1877.

Price, $5.00.



A represents the dome aspirator-needle, with the cutting point projected, ready for puncture; *G*, a magnified diagram of the same, after insertion, with the dome advanced so as to protect the interior of the cavity during aspiration; *E*, bulb in upright position, to insure the best action of valves; *C C*, valves; *D*, entrance-tube; *E*, exit tube; *F F*, bits of glass tubing, through which to observe the presence or absence of fluid.

Fig. 48.—ELASTIC SPRING HEAD-REST FOR TORTICOLLIS.

By J. R. Wood, M. D., New York.

Medical Record, November 10, 1877.

Price, $5.00.

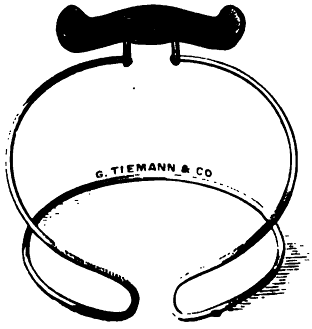


Fig. 49.—A STEAM SPRAY APPARATUS FOR THE ANTISEPTIC TREATMENT OF WOUNDS.

By ROBERT F. WEIR, M. D., New York.

New York Medical Journal, December, 1877.

Price, $15.00.

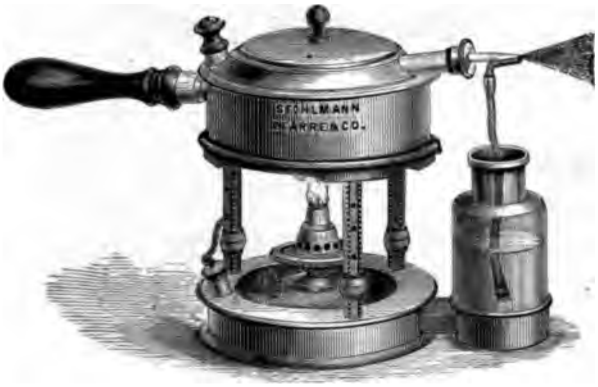


Fig. 50.—TIEMANN &·CO.'S HYPODERMIC SYRINGE BOTTLE.

New Remedies, December, 1877.

Price, (see our List of Hypodermic Syringes.)

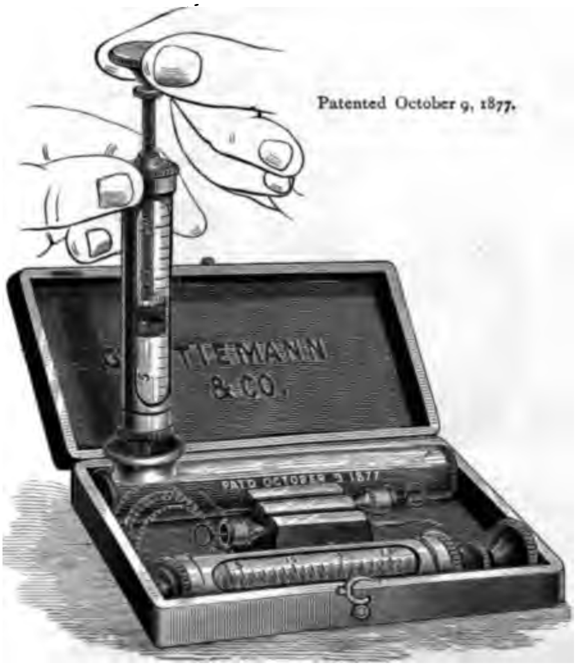
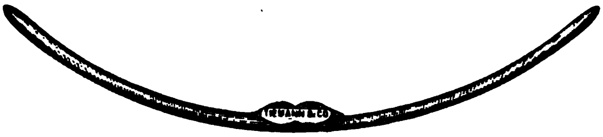

Patented October 9, 1877.

Fig. 51.—PROBES FOR THE TREATMENT OF STRICTURES OF THE NASAL DUCT.

By SAMUEL THEOBALD, M. D.

Transactions of the Medical and Chirurgical Faculty of Maryland, Baltimore, 1877.



No. 1.—¼ m. m.
2.—½ m. m.
3.—¾ m. m.
4.—1 m. m.
5.—1¼ m. m.
No. 6.—1½ m. m.
7.—1¾ m. m.
8.—2 m. m.
9.—2¼ m. m.
10.—2½ m. m.
11.—2¾ m. m.
No. 12.—3 m. m.
13.—3¼ m. m.
14.—3½ m. m.
15.—3¾ m. m.
16.—4 m. m.

Fig. 52.—A NEW MOUTH GAG.

By ROBERT F. WEIR, M. D., New York.

Medical Record, January 5, 1878.

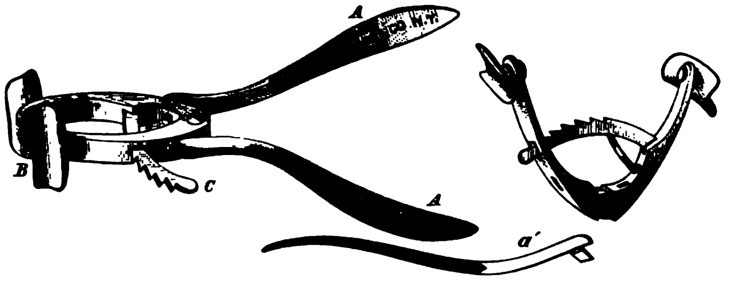


Fig. 53.—A NEW INHALER FOR ANÆSTHETICS, &c.

By A. SPEIRS GEORGE, M. D., Richmond, Va.

Virginia Medical Monthly, January, 1878.

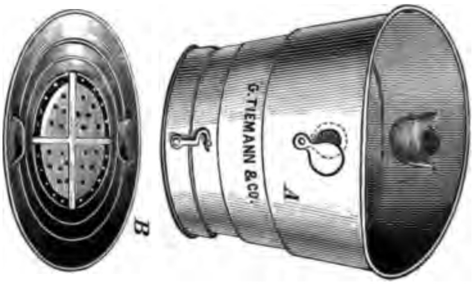


Fig. 54.—AN IMPROVED CATCH FOR SANDS' NEEDLE-HOLDER

By DAVID E. DUDLEY, M. D., MANILA, P. I.

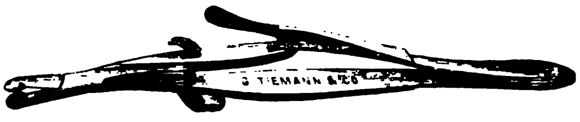


Fig. 55.—AN IMPROVED ENUCLEATOR.

By H. C. YARROW, M. D., Washington, D. C.

Medical and Surgical Reporter, Philadelphia, March 16, 1878.

Price, $4.00.

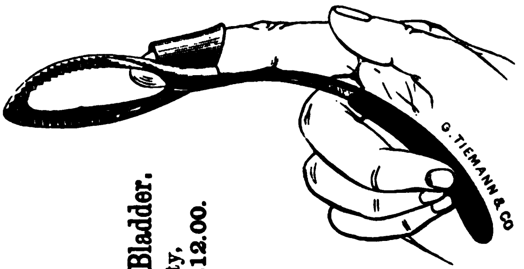


Fig. 56.—A NEW PSYCHROPHOR FOR URETHRAL HEMORRHAGE.

By W. H. BATES, M. D., Brooklyn, N. Y. March, 1878. Price, $4.00.

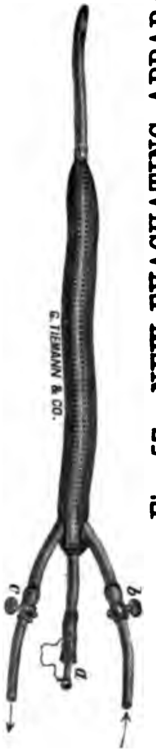


Fig. 57.—NEW EVACUATING APPARATUS for the Bladder.

By H. J. BIGELOW, M. D., Prof. of Surgery in Harvard University, Surgeon of the Mass. General Hospital. Price, $12.00.

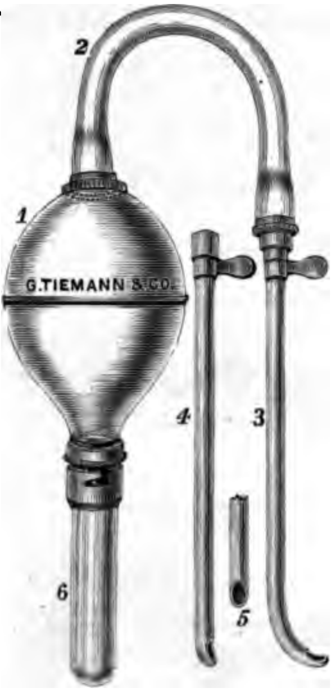


Fig. 58.—AN IMPROVED LITHOTRITE.

By HENRY J. BIGELOW, M. D., Professor of Surgery in Harvard University.

Boston Medical and Surgical Journal, March 7, 1878.

Price, $40.00.

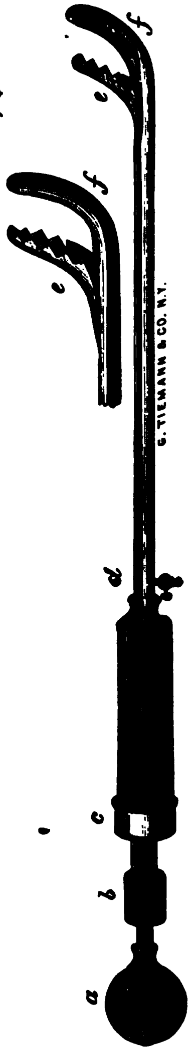
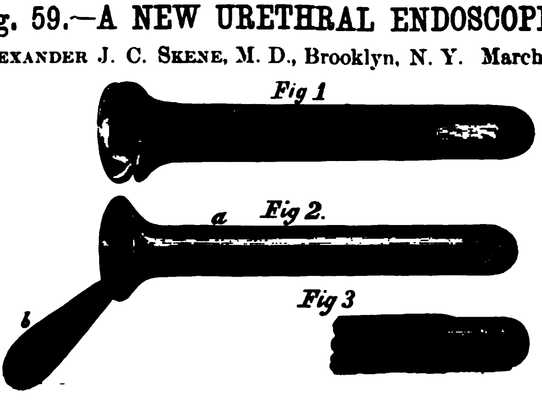


Fig. 59.—A NEW URETHRAL ENDOSCOPE.

By ALEXANDER J. C. SKENE, M. D., Brooklyn, N. Y. March, 1878.



Price, $2.75.

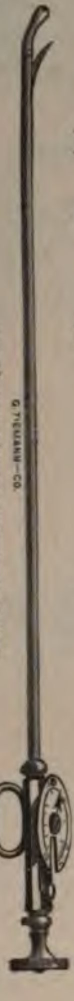


Fig. 60.—A NEW URETHROTOME.

By H. W. BATES, M. D.

New York Medical Record, January, 1877.

Fig. 61.—REFLUX CATHETER.

By ALEXANDER J. C. SKENE, Brooklyn, N. Y.

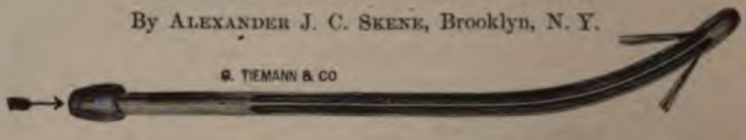


Fig. 62.—SKENE'S DOUBLE PERFORATED CATHETER.

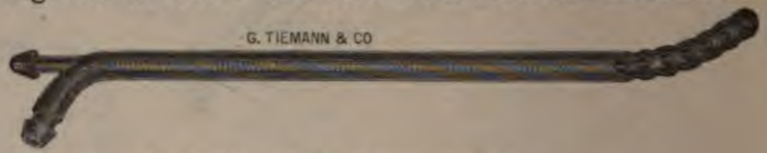


Fig. 63.—SKENE'S SELF-RETAINING CATHETER.

(Modification of Goodman's.)

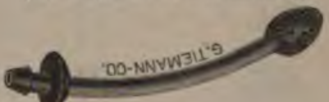


Fig. 64.—A NEW ARTERY FORCEPS.

By H. J. BIGELOW, M. D., Boston, Mass.

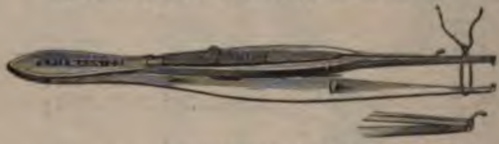
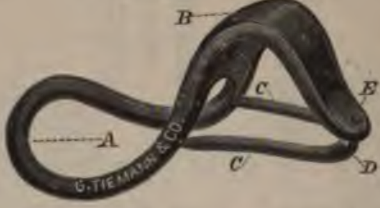


Fig. 65.—SKENE'S CYSTOCELE PESSARY.



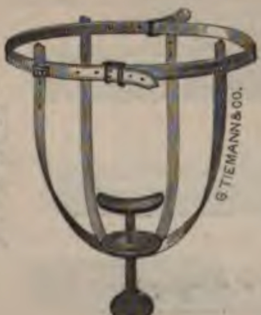
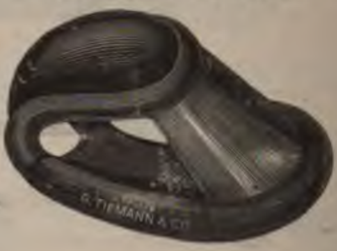


Fig. 66.—OTIS' PERINEAL TOURNIQUET.

Fig. 67.—BOZEMAN'S VAGINAL SUPPORT.



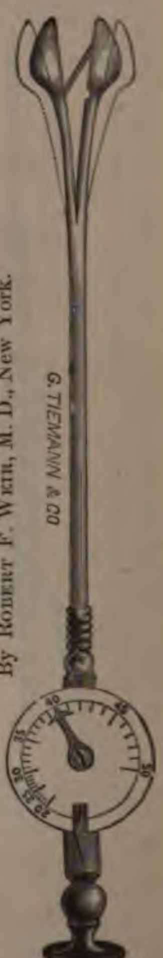


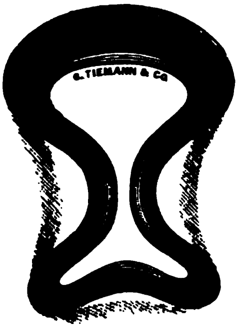
Fig. 68.—A NEW URETHRAMETER.

By ROBERT F. WEIR, M. D., New York.

Fig. 69.—A NEW RETROFLEXION PESSARY.

By ALFRED L. CARROLL, M. D., New Brighton, N. Y.

Medical Record, March 30, 1878.



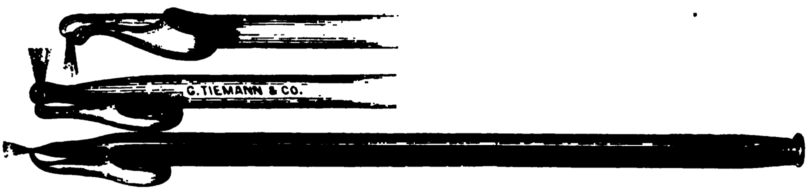
It is constructed of a steel spring covered with india rubber, and its "hour-glass" shape, as shown in the accompanying wood-cut, serves a double purpose.

In the first place, the central constriction furnishes the same sort of elastic extension as is given by the spring in Scattergood's pessary; and, in the second place, the contraction of the vagina around this central constriction tends to increase the supporting power of the instrument, while conducing to the comfort of the wearer. The material is sufficiently pliable to be bent into the required curve for any given instance, and its elasticity in all directions enables it to yield, to a certain extent, to the patient's movements, without altogether relaxing its support.

Fig. 70—NEW ATOMIZER FOR SPRAYING THE THROAT.

By H. T. HANKS, M. D., New York.

Medical Record, March 30, 1878.



The set consists of three straight tubes of strong glass, seven inches in length, tapering at the distal end to a point with only a small perforation. On the right side of this extremity a second little funnel-like tube is strongly cemented. This is for holding the few drops of the medicament to be used, and may be filled from the bottle or with a pipette.

As may be seen in the cuts, in one instrument the point of the medicine-tube is exactly in front of the air-tube; this is for throwing the spray directly into the throat. In the other two a variation in the direction of the tube gives a corresponding direction to the spray, so that it may be thrown upward with one instrument and downward with the other.

A common Davidson syringe or rubber air-bulb may be attached to the proximal end of the long tube for forcing the air through.

Both tubes, for an inch from the distal end, are flattened on their under surface, and roughened, and serve the purpose of a tongue-depressor.

The advantages claimed for these atomizers are as follows: 1. They are compact. 2. They are inexpensive. 3. Only the necessary quantity of medicine need be used. 4. The throat is surprised, not by a preliminary gush of air, but by the instantaneous application of the remedy directly to the affected parts, before any contraction can take place.

Fig. 71.—A NEW URETHRAMETER.

By SAMUEL W. GROSS, M. D., Philadelphia, Pa.

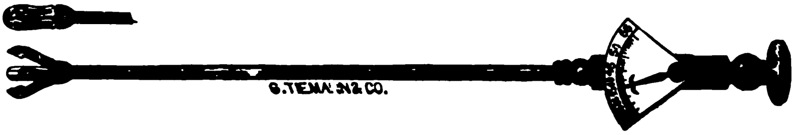
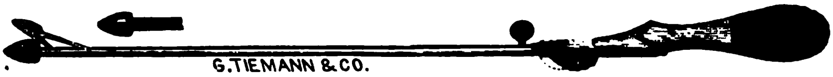


Fig. 72.—URETHROTOME.

By Samuel W. Gross, M. D., Philadelphia, Pa.

Medical Record, June 15, 1878.

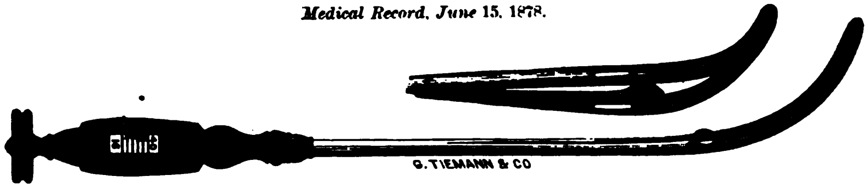


It is nothing more, as may be seen in the woodcut, than a metallic exploratory bougie, the slender shaft being provided with a handle, grooved for the reception of a steel rod, to one end of which is attached the blade, and to the other a button, through the retraction of which the former is thrown out of the under surface of the bulb, so that the incision may be made along the floor of the urethra. The extent to which the blade can be projected is regulated by a lateral screw near the handle. The length of the contrivance is eleven inches, of which three are taken up by the handle, button and screw. In actual practice I have found two such instruments to be all that are required. In one, which is intended for strictures of moderate calibre, the bulb is equal to No. 15 of the French catheter scale; while, in the other, the bulb corresponds with No. 23, which suffices to define coarctations of much larger size. In exceptional cases, still larger bulbs may be demanded.

Fig. 73.—A NEW URETHRAL DILATOR.

By Samuel W. Gross, M. D., Philadelphia, Pa.

Medical Record, June 15, 1878.



I have arrived at the conclusion that enlargement of the meatus is uncalled for when the relation between its size and that of the spongy urethra is normal. Hence, I have been trying for some months past to devise an instrument with which, after divulsion or internal incision, the several parts could alone be stretched during the healing process, without detriment to the remainder of the urethra, and I have finally succeeded, with the assistance of Messrs. Geo. Tiemann & Co., in perfecting the dilator shown in Fig. 2. It consists of a No. 16 steel sound, the terminal two-thirds of which are split into two halves to form the blades. These are united at the vesical extremity, where they are carefully bevelled, and can be separated laterally, so as to form a spindle-shaped body, by a flattened cone attached to a rod, which is acted upon by a wheel at the proximal end of the handle, the extent to which the blades can be parted being indicated by a register, marked in millimetres, attached to the handle.

In using the instrument, the blades are expanded sufficiently to traverse the meatus without overstretching it, when its centre is made to correspond with the divided stricture, and the wheel is slowly turned until the register indicates that the desired degree of distention has been reached. By reversing the wheel, the blades are approximated and the dilator withdrawn.

Fig. 74.—A NEW DOUBLE CANULATED NEEDLE.

For Wire Sutures in Staphylorrhaphy, Vesico-Vaginal and Fistula in Ano.

By D. A. Currie, M. D., Englewood, N. J.

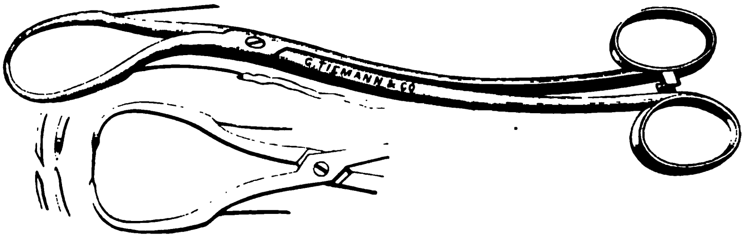
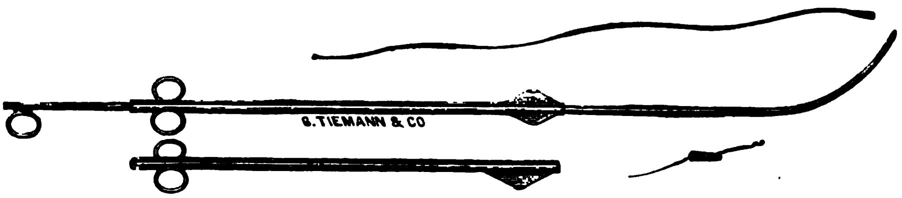


Fig. 75.—A NEW ROTATING URETHROTOME.

By JOHN A. PRITCHETT, Hayneville, Ala.

New York Medical Journal, July, 1878.



It may be called a modification of Maisonneuve's, and consists of the following parts: First, we have a plain cylindrical rod or staff, fifteen inches long, two millimetres in diameter, and with the short curve of Bumstead. The external extremity has attached on its under surface a ring to serve as a handle, while the internal extremity terminates in a screw for the attachment of filiforms. A tunneled screw-head (Gouley's attachment) is also provided to screw on for using the finest whalebone guides. Next, and in this consists the peculiarity of the instrument, we have three tubes, each seven inches long, and fitting the rod closely, and with a slit down its entire length so as to pass the ring-handle of the staff. At the external extremity of each tube are attached laterally two rings for handles; while each internal extremity is beveled so as to pass strictures more readily. One tube carries at its internal extremity, attached superiorly, a triangular, probe-pointed blade, nine millimetres in size; a second tube carries a similar blade, seven millimetres in size, also attached superiorly; while the third tube carries two similar blades, each four millimetres in size, attached laterally.

The staff is made so long (fifteen inches) in order that the entire tube may pass the ring-handle before the blade enters the meatus.

Fig. 76.—NEW INSTRUMENT FOR RAPID AND FORCIBLE DILATATION OF THE CERVICAL CANAL.

By H. D. HANKS, M. D., New York.

Medical Record, July 27, 1878.

(Hank's Rapid Uterine Dilators, set of ten.)

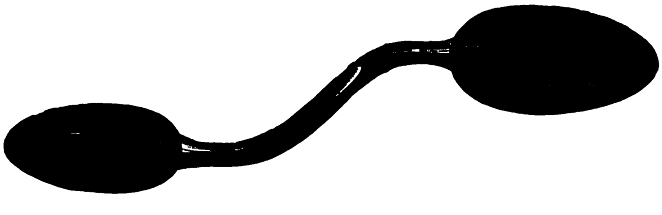
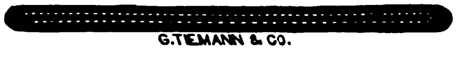
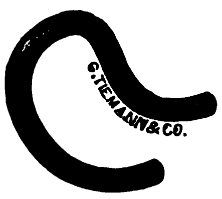


Fig. 77.—A MODIFICATION OF HODGE'S OPEN-LEVER PESSARY.

By JNO. S. COLEMAN, M. D.

Medical Record, July 27, 1878.





It is made of copper wire, covered with soft rubber, and can be bent into any desired shape.

THREE NEW URETHRAL INSTRUMENTS.

By ALEXANDER S. HUNTER, M. D., New York.

Medical Record, November 9, 1878.

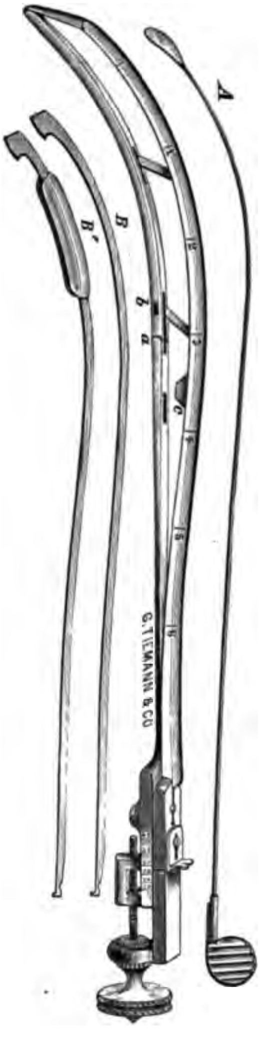


Fig. 78.—HUNTER'S DIVULSOR AND URETHROTOME.

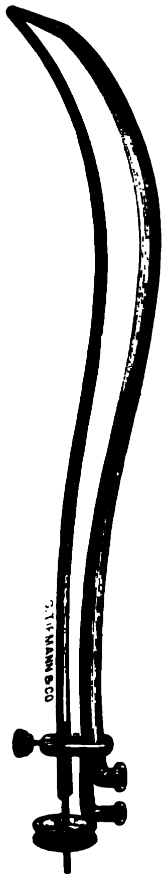


Fig. 79.—HUNTER'S URETHRAL TOURNIQUET.

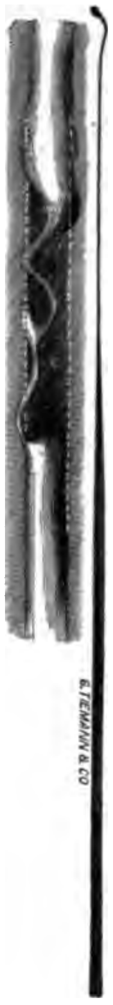


Fig. 80.—HUNTER'S FILAMETOUS WEDGE.

Fig. 81.—A NEW DILATING URETHROTOME.

By C. W. STEARNS, M. D.

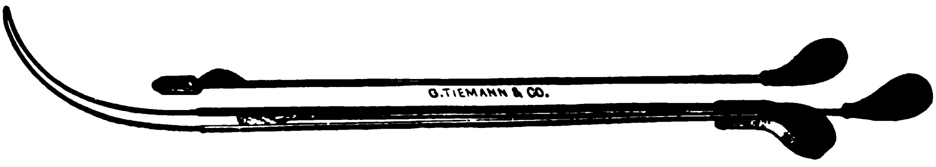


Fig. 82.—A NEW BOW PESSARY.

By C. N. FOWLER, M. D., Youngstown, O.

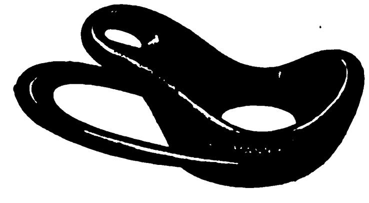
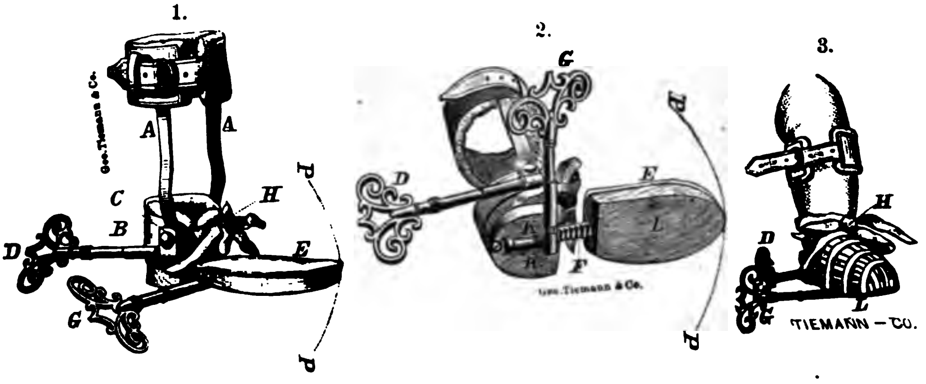


Fig. 83.—A NEW CLUB FOOT EXTENSION APPARATUS.

By NEWTON M. SHAFFER, M.D., New York

Medical Record, November 23, 1878.

The club-foot extension apparatus, 1, consists of the ordinary uprights, *A*, *A*, fastened to the conventional heel-piece, *B*, by a plain joint on one side, and an endless screw, *C*, on the other. This screw, *C*, allows us, by using the key, *D*, to place the foot-piece of the apparatus, as a whole, in any antero-posterior position we choose, and to alter it at will, either before or after application to the foot. The dotted line, *P*, *P*, is supposed to represent the arc of a circle, the centre of which is the screw, *C*. That part of the foot-piece, *E*, which corresponds with the tarsus and metatarsus, is joined by a common extension rod, *F* (shown in 2), to the portion which lies under the os calcis. With the key, *G*, we are enabled to extend the anterior part of the foot-piece, *E*, at pleasure. 2 shows the apparatus lying on its side, with a full view of the under surface of the foot-piece, *E*, and the extension rod, *F*. At *K*, *K*, is a leather, or rubber heel, built up on either side of the extension cylinder, and *L* represents a wooden sole, which is elevated to a height corresponding with the rubber heel. So far as this apparatus is concerned, I may say that it presents no novelty, save the extension rod, and the modifications which this addition to the apparatus makes necessary.



To apply this instrument, we first, by means of the key, *D*, place the foot-piece in a position that will exactly correspond with the antero-posterior position of the foot (whether tenotomy has been performed or not). We then secure the heel by tying the heel-strap, *H*, as represented in 3. We then bind the foot, anterior to the medio-tarsal joint, to the extension part of the foot-piece, *E*, by means of adhesive plaster, *vide* 3. We first apply four or five strips to the plantar integument, which are reversed as they pass over the end of the foot-piece, and are then fastened to the under part (wooden) of the foot-plate. Five or six strips are now passed longitudinally over the toes, and underneath, where they are also secured. Transverse pieces are then passed around the tarsus and metatarsus—also underneath the foot-plate—and secured at convenient points. (The plantar strips are not shown in the engraving, and the artist has placed key *G* too far forward). A bandage is then applied to protect the adhesive plaster. The key, *D*, is now used to flex the foot, in overcoming to the desired extent the tendo Achillis resistance.

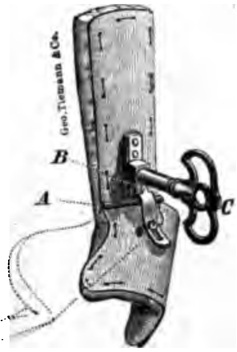
Fig. 84.—MODIFICATION OF TAYLOR'S ANKLE SUPPORTS.

By NEWTON M. SHAFFER, M. D., New York.

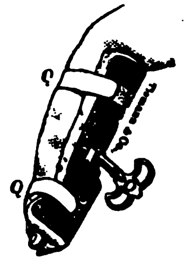
Medical Record, November 23, 1878.

I have deemed it best as a matter of experience not to adopt the club-foot extension apparatus to the purely lateral deformity, as mentioned before. It is, ordinarily, and especially in infants, a very easy matter to rectify this by any lateral support of gutta-percha, tin, or other flexible material. In obstinate cases it is well to make subcutaneous sections to save time. I have found a very useful lateral splint in a modification of Taylor's "ankle-support," which is represented in 4. My modification consists in the substitution of the *lateral* hinge, *A*, and the endless screw, *B*, for the antero-posterior joint. The dotted lines show the movement acquired by using the key, *C*. This modification enables us to apply the apparatus *accurately* to the *extremes* of varus (or valgus), and to gradually, by means of the key, *C*, turn the foot to the desired extent.

4.



5.

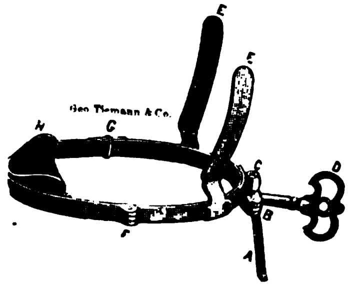


This splint is applied, as represented in 5, to that side of the foot toward which the deformity looks. It should be secured by a bandage (the bandage is omitted in the engraving, and two strips of adhesive plaster, *Q*, *Q*, are substituted, so that the application of the splint may be more easily shown). The counter-extension surface being large, and the resistance generally slight, the pressure may be very gradually applied. The foot can, under ordinary circumstances, be changed from the varus into a valgus position without any pain whatever.

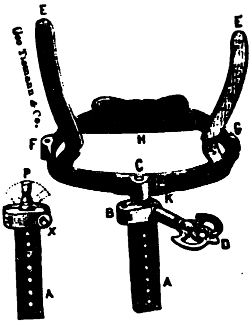
Fig. 85.—Dr. NEWTON M. SHAFFER'S BALL AND SOCKET PIVOT.

For the Treatment of Malpositions of the Head.

1.

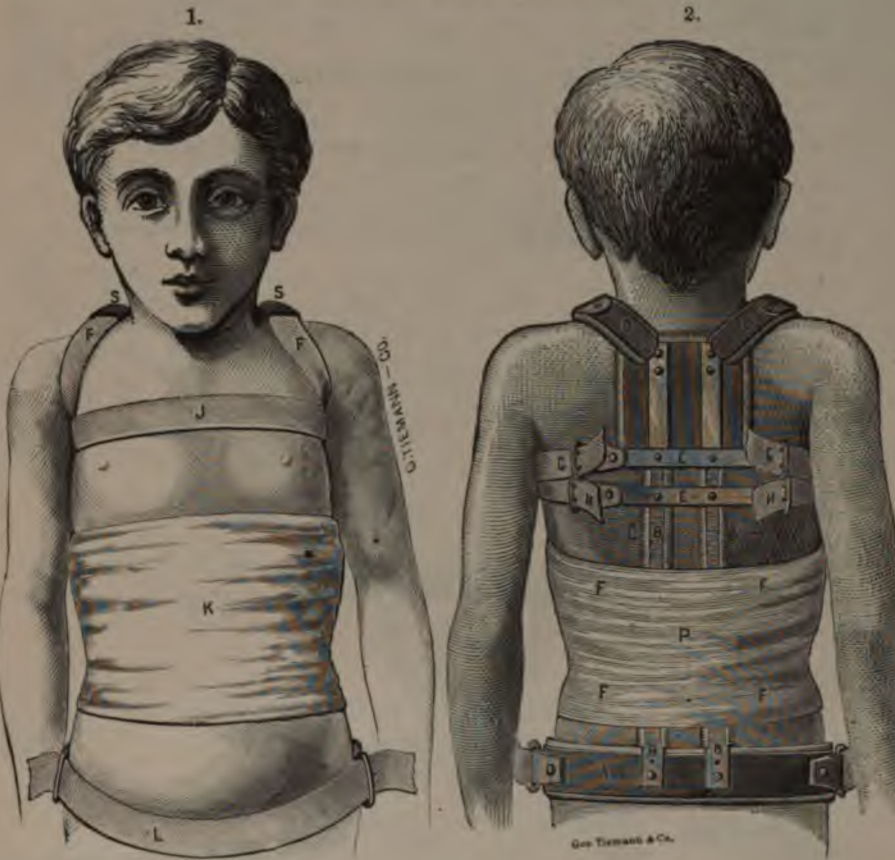


2.



This apparatus, shown in the engravings, consists of a pivot, *P*, which may be placed at any desired angle, either lateral or antero-posterior, and held there by a clamp which is controlled by a screw operating at *X*. The pivot fits into the chin-piece (Taylor's) at the point *C*, and, by means of the occipital uprights, *E*, *E*, and the chin-cup, *H*, any position of the head may be maintained and changed at will, without removing the apparatus from the patient. The key, *D*, loosens the ball of the pivot, and, the head being placed by the hand in the desired position, the key again is used to tighten the clamp. The whole apparatus may be made to surmount the two uprights of Taylor's spinal brace or any other form of support which furnishes a reliable pedestal. The chin-piece opens at *F* on a hinge, and the slide at *G* secures the apparatus after it is applied to the head. It is an extremely useful instrument, both in Potts' disease, requiring a head support, and in torticollis.

Fig. 86.—Dr. NEWTON M. SHAFFER'S PLASTER ZONE APPARATUS, FOR POTTS' DISEASE.



1 and 2 represent this apparatus. It consists of two perfectly plain uprights of annealed bar steel, *B*, *B*, riveted to the hip band, *A*, with cross-pieces, *E*, *E*, and shoulder-pieces, *D*, *D*. There are no "pad plates," or "cork" or "hard rubber" pads, no "hinges" or "screws," as in the Taylor spinal brace, from which this apparatus is modified. *F*, *F*, *F*, *F*, represents a zone of plaster of Paris applied around the body and covering the uprights. *P* is opposite the deformity. The pads, *C*, *C*, are simple rolls of canton flannel, stitched to the uprights by transverse stitches, as shown in the engraving.

2 shows the anterior appearance of the apparatus. *J* is a padded webbing strap, which buckles at *G*, *G*, in 1. *F*, *F* are two axillary straps, which are buckled to the shoulder-pieces, *D*, *D* 1. *L* is a padded pelvic strap, which is inserted at either end in the buckles on hip band *A*. *K*, in Fig. 2, shows the anterior appearance of the plaster zone which takes the place of the yielding "apron" of the Taylor spinal brace.

To apply this apparatus, the patient is placed upon two tables of equal height. The tables are then separated so that the part that is to receive the plaster zone shall be easily accessible from all sides. The head of the patient being grasped by one assistant, and the thighs by another, gentle but steady traction is made, while the operator, using a couple of monkey wrenches, bends the straight uprights to correspond with the outline of the transverse processes. The canton flannel pads are now sewed on and the apparatus is laid on the back. The pelvic and thoracic straps are tightened ; a strip of canton flannel is passed around the body, covering the deformity ; traction is steadily made, and, by means of the plaster roller bandage, ordinarily prepared, a zone of plaster is snugly applied, covering only two or three vertebræ above and below the diseased bones.

Fig. 87.—A NEW SUBCUTANEOUS SAW, KNIFE AND BONE RASP.

By GEORGE F. SHRADY, M.D.

New York Medical Record, January 4, 1879.

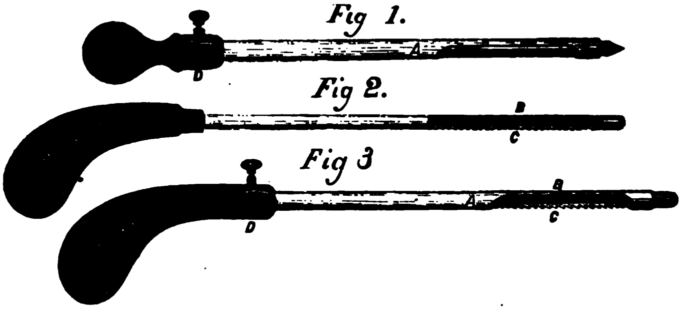


Fig. 88.—A DOUBLE FORCEPS.

By C. S. CLEBORNE, M.D., Medical Inspector, U. S. Navy.

New York Medical Record, January 25, 1879.

(Artery, Bulldog and Tissue Forceps, and Needle Holder.)

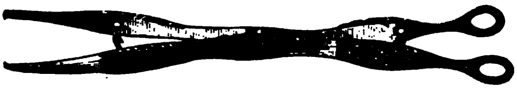
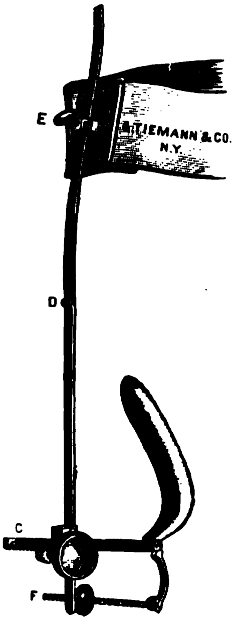


Fig. 89.—A NEW SPECULUM VAGINÆ.

By V. BIART, M.D., U. S. A



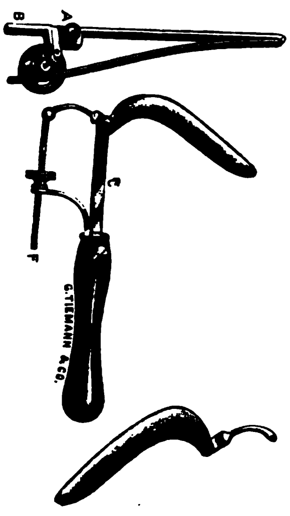
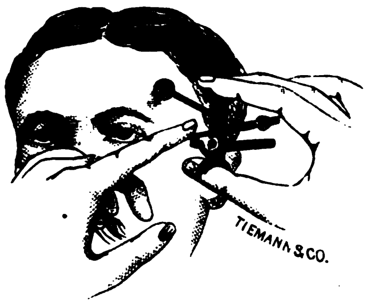


Fig. 90.—POLITZER'S UNIFORM ACOUMETER.

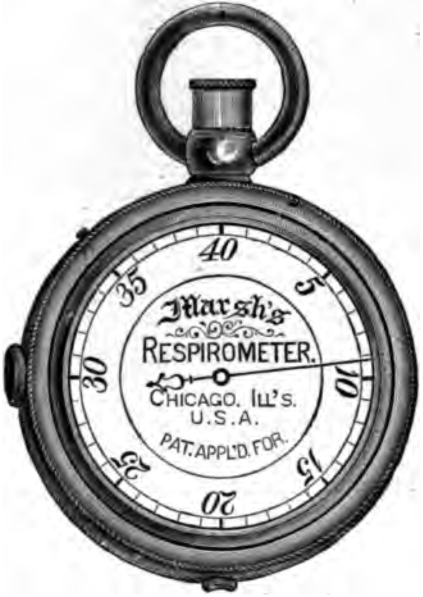


"Politzer's Acoumeter consists of a steel cylinder, four millimetres in diameter and twenty-eight millimetres long, set in vibration by the blow of a hammer—also of steel.

"The cylinder is fastened vertically to a small column of vulcanite, the hammer being freely suspended from a slot in this column by means of a pin. The lever of the hammer projecting behind and beyond, the vulcanite can be depressed to a certain point, and when liberated allows the hammer to strike the cylinder from a certain height, thereby insuring a certain intensity of tone. The instrument may be held between the thumb and forefinger, the middle finger being free to set the hammer in motion. A small disk is fastened to the vulcanite by means of a pin—this is used for testing perception for bone conduction."—*Dr. A. Hartmann, Berlin, translated by Dr. Blake, Boston.*

"Politzer's Acoumeter, to supply a uniform test of hearing, as made by GEO. TIEMANN & Co., is an accurate imitation of Politzer's own pattern; showing no difference whatever from Politzer's model as to intensity, tint and pitch of sound."—*Dr. H. Knapp, New York.*

Fig. 91.—MARSH'S RESPIROMETER



[Showing exact size.]

Is a mechanism for measuring the amount of air—

1. Taken into the lungs at each *natural* inspiration.
2. Expelled from the lungs at each natural *ex*piration.
3. Drawn into the lungs by a *forced* inspiration.
4. Expelled from the lungs by a forced *ex*piration.

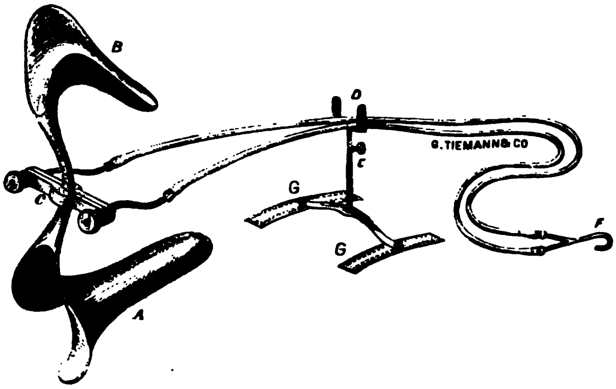
Directions and explanations accompany each instrument.

Price, $10.00.

Fig. 92.—AN ADDITION TO THE SIM'S SPECULUM FOR MAKING THAT INSTRUMENT SELF-RETAINING.

By B. E. Fryer, M.D., Surgeon U. S. Army.

New York Medical Record, March 22, 1879.



We have devised a very simple addition, which can be made to any Sims' Speculum, and which readily allows of that instrument being used as a self-retaining one. The accompanying wood-cut illustrates the Speculum with this addition applied to it.

A and *B* are the blades of the instrument; at *C* two parallel bars, running at right angles to the shaft of the Speculum, are clamped firmly by circular milled nuts, which turn upon two cylindrical bars, which latter, at their further extremity, are slightly curved. Upon each of the ends of the curved bars is fastened a piece of India rubber tubing, and the tubing is united in a metal hook at *F*. At *D* the tubes pass over what we call the "bridge," which has a base at *G*. The vertical portion of the bridge allows of being raised or lowered, and of retention at the desired height by a screw at *E*.

The flange of the blades, or specular portion of the instrument, is modelled after that of Emmet, and these blades are so bent as to make, with the handle or shaft, an angle less than that in the Sims' instrument as usually made; this lessened angle, as is now generally known, having been found a more convenient one.

The mode of using the instrument is quite simple. The cross-bars being loosened by turning the milled nuts, are slid up the handle out of the way, the blade to be used is introduced (the patient being of course in the Sims' position), the cross-bars are brought down again, as shown in the wood-cut, and fastened; the bridge is placed on the patient's sacrum, over the clothes, and the rubber tube carried over the patient's right shoulder. The operator now draws upon the Speculum, as is done in the Sims' instrument, until sufficient perineal retraction is had, when the tubes, which have been carried over the patient's right shoulder, are drawn upon by the patient (or assistant), and either held in her right hand, or fastened by the hook to a staple in the table on which she is lying. It will be found that a very slight strain by the patient will retain the instrument, for the tubes bind, as it were, upon the shoulder, and allow of the retention of the instrument by a but comparatively slight muscular effort; and even if this effort is impossible, as it would of course in a prolonged operation, and in any case under anæsthesia, the hook could be easily fastened so as to hold the instrument firmly.

Fig. 93.—A NEW UTEROMETRIC SOUND.

By N. Leonard, M.D., Detroit.

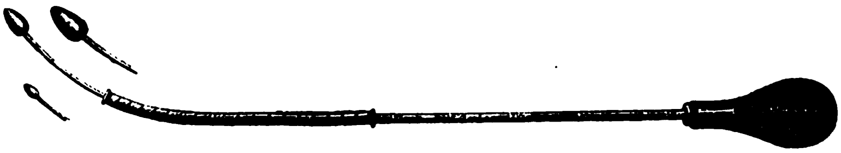
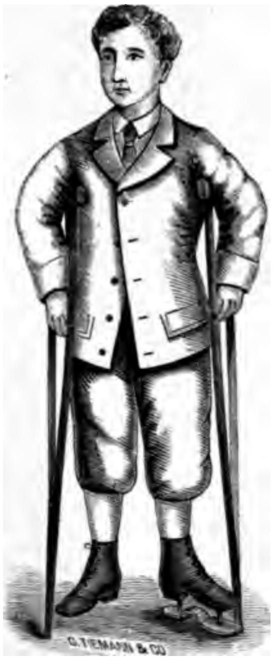


Fig. 94 a, b, c, d.—METHOD OF TREATING HIP, KNEE AND ANKLE JOINT DISEASE.

By J. C. HUTCHISON, M.D., Brooklyn, N. Y.

Proceedings of the Medical Society of the County of Kings, April, 1879.

a

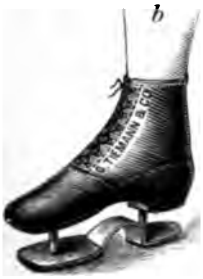


To the shoe of the sound limb a steel plate corresponding to the sole of the shoe is attached by upright rods two and a half inches in length, so as to raise the foot from the ground; it is the shoe ordinarily used for shortened leg. This elevated shoe and a pair of crutches constitute the apparatus. As the patient stands on his crutches the diseased limb is suspended; the shoe is high enough to prevent the toes of the affected side from touching the ground, and the sole should be covered with leather, to avoid noise when walking.

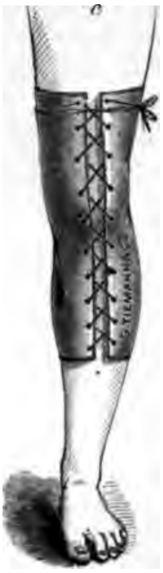
Extension is made by the weight of the suspended limb, which is equal in weight to one-fifth of the whole body, is greater than the weight ordinarily employed for extension, and is quite sufficient to subdue the spasm of the muscles which crowd the head of the bone into the inflamed acetabulum, and is the chief cause of the pain which the patient experiences.

To secure *fixation* of the knee-joint, I use splints made of hatters' felt. It consists of seven layers of cotton cloth saturated with shellac, and well rolled together while hot. That ordinarily sold consists of but five layers of cloth, which, for most cases, is not firm enough. To give effectual rest to the joint, the splint should be of sufficient length and wide enough to nearly surround the limb; it should extend half way up the thigh, and to a corresponding point below the knee. A shorter splint, merely wide enough to cover the posterior part of the limb, does not secure the complete immobility which I have insisted upon in the treatment of diseases of the joints, where absolute rest is demanded. The splint having been cut of the proper length and width (the material is easily cut with a sharp knife), and the limb covered with a stocking, the felt made pliable, preferably by dry heat in an oven or before an open fire, or by immersion in very hot water, is applied to the limb, and covered quickly and firmly with a bandage from below upwards, so as to mould it to all the inequalities of the surface. While the splint is being applied, an assistant should make extension from the foot so as to straighten the limb as much as possible, in cases where the joint is flexed; but no violent effort should be made to reduce the malposition. So soon as the splint regains its inflexibility, and this it does very quickly, it may be removed, trimmed up and holes punched an inch or an inch and a half from the front edges for lacings. The object in punching the holes a little way back from the edges is to permit the splint to be made smaller by cutting off the edges, so that

b



c



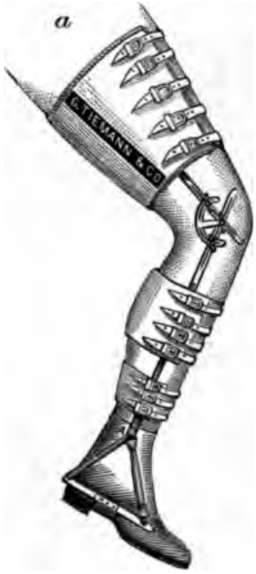
[illegible]

[illegible] in two parts, con- [illegible] with the heel [illegible] the steel strip [illegible] near the ankle, where it [illegible] to the back of the heel. Here it is hinge-jointed with a horizontal [illegible] strip, which at its other extremity is connected by a rubber cord with the first bar at the point where it is bent.

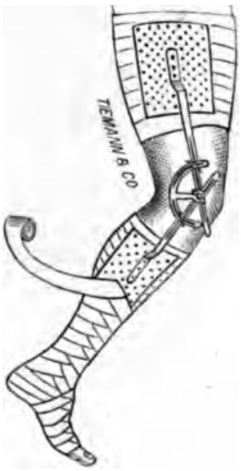
The *bracket* is composed of zinc or copper, connected to a compound slotted bridge, similar to that described for the brace. The terminal plates are so punched that the edges of the perforations will be elevated above the surrounding surface, and thus cause them to be held firmly in place by the plastered bandage. A steel slotted sector is attached to the bridge, either before or after the bracket has been secured upon the limb, as the case may demand.

This splint is so simple in construction and yet so perfect, that its principle is as readily applied to the elbow, hip and intervertebral articulation as to the knee.

a



b



c

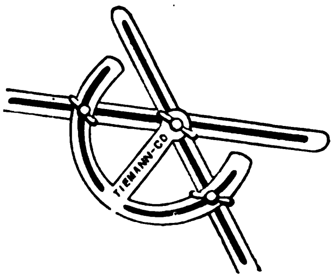
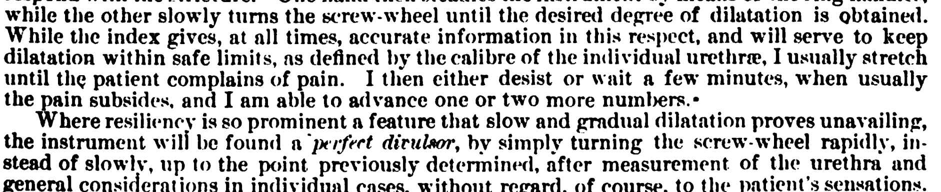


Fig. 96.—A NEW URETHRAL STRICTURE DILATOR.

By GEO. M. SCHWEIG, M.D., New York.

New York Medical Record, May 3, 1879.

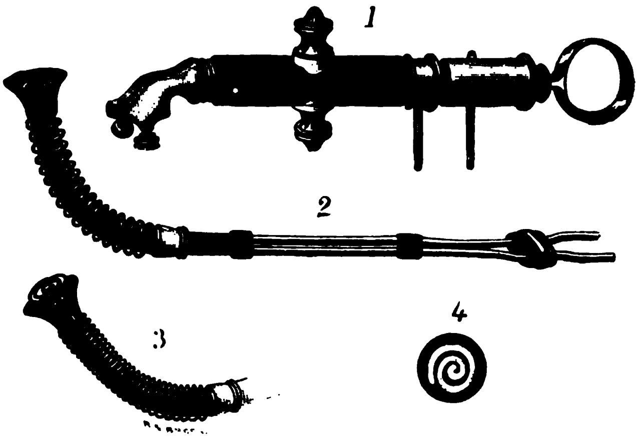


The modus operandi is sufficiently simple. The exact location of the stricture having been determined, the Dilator is introduced a distance to make the centre of the dilating wedge to correspond with the stricture. One hand then steadies the instrument by means of the ring handles, while the other slowly turns the screw-wheel until the desired degree of dilatation is obtained. While the index gives, at all times, accurate information in this respect, and will serve to keep dilatation within safe limits, as defined by the calibre of the individual urethræ, I usually stretch until the patient complains of pain. I then either desist or wait a few minutes, when usually the pain subsides, and I am able to advance one or two more numbers.

Where resiliency is so prominent a feature that slow and gradual dilatation proves unavailing, the instrument will be found a *perfect divulsor*, by simply turning the screw-wheel rapidly, instead of slowly, up to the point previously determined, after measurement of the urethra and general considerations in individual cases, without regard, of course, to the patient's sensations. I have used it a number of times in this way, and was surprised to find with how little reaction, owing probably to the broad surface of the dilating wedge. Before withdrawing the instrument, the screw must, of course, be turned all the way back, to allow the wedge to sink back within the shaft. The instrument is so constructed that, after use, the wedge can be removed entirely, and both it and the shaft thoroughly cleaned.

Fig. 97.—LARYNGEAL CAUTERY ELECTRODE.

By R. P. LINCOLN, M. D., New York.

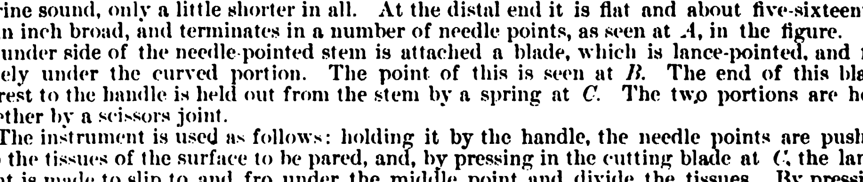


It consists of an Electrode fitted to Schroetter's Handle. In some cases the shield may be dispensed with, either on account of the patient being able to avoid contraction of the palate during an operation, or when it can be controlled by some retractor.

1. Schroeter's Universal Handle; 2. Electrode, on which is fixed a spiral spring terminating in a shield of bone, concealing a platina disk, which terminates the electrode; 3. The same, with the disk disclosed by the recession of the shield when pressed against the tissue in the act of cauterization. The shield serves to protect the surrounding parts in case the instrument is grasped by them during an operation; 4. The disk in its relation with the shield.

Fig. 98.—A NEW UTERINE SECTOR.

By ALEXANDER J. C. SKENE, M. D., Brooklyn, N. Y., May, 1879.



The Uterine Sector, as my friends the instrument-makers, GEO. TIEMANN & Co., call it, is an instrument which I devised for vivifying the tissues in the operation for the restoration of the cervix uteri after laceration. The handle and stem is about the shape and size of a uterine sound, only a little shorter in all. At the distal end it is flat and about five-sixteenths of an inch broad, and terminates in a number of needle points, as seen at *A*, in the figure. To the under side of the needle-pointed stem is attached a blade, which is lance-pointed, and fits closely under the curved portion. The point of this is seen at *B*. The end of this blade nearest to the handle is held out from the stem by a spring at *C*. The two portions are held together by a scissors joint.

The instrument is used as follows: holding it by the handle, the needle points are pushed into the tissues of the surface to be pared, and, by pressing in the cutting blade at *C*, the lance point is made to slip to and fro under the middle point and divide the tissues. By pressing the point of the instrument forward, and at the same time alternately pressing and relaxing at the end of the cutting blade, a strip of a surface can be shaved off with facility.

This instrument is not designed to take the place of the scissors or knife, but is intended as an assistant. For paring the edges of the divided cervix, when the tissues are so hard as to elude the knife or scissors, this Sector is quite valuable. In paring the upper angle of a fissure of the cervix that runs up above the vaginal juncture, I have used it with more facility than I could the scissors or knife.

PRICE LIST.

NOTICE.

Please remit with your order to save the expense of C. O. D. return charges. Send Bank Draft or Post Office Money Order on New York. Cash in small amounts may be safely sent by mail, REGISTERED.

Parties finding it convenient to obtain our instruments through dealers, are requested to order "TIEMANN'S MANUFACTURE," *as otherwise inferior goods are frequently substituted.*

All goods of our manufacture have our name stamped upon them.

PRICE LIST
OF
SURGICAL INSTRUMENTS AND APPLIANCES,
REPRESENTED AND ENUMERATED IN THE
American Armamentarium Chirurgicum.

◆

GEORGE TIEMANN & CO., NEW YORK.

◆

Part I.

FIG.		PRICE
	Amputating and Trepanning.	
1.	T. & Co.'s Bow Saw	$8.50
1*b*.	Stohlmann's Rotating Saw	35.00
2.	T. & Co.'s Capital Saw	5.00
2*b*.	Satterlee's Capital Saw	5.00
2*c*.	Parker's Capital Saw	4.50
3.	Metacarpal Saw	1.50
4.	Catling, small	2.00
	Catling, medium	3.00
	Catling, long	4.50
5.	Liston's Knife, small	2.50
	Liston's Knife, medium	3.50
	Liston's Knife, long	4.50
6.	Wood's Circular Knife	4.00
6*b*.	Wight's Folding Knife	5.50
7.	Liston's Long Knife	4.50
8.	Parker's Knife	5.50
9.	Conant's Saw and Knives	12.00
	Conant's Saw and Knives	9.00
10.	Trepanning Scalpel	1.50
11.	Amputating Scalpel	1.00
11*b*.	Amputating Scalpel	1.50
12.	Amputating Tenaculum	1.25
12*b*.	Amputating Tenaculum	1.00
13.	Lenticular Knife	1.50
13*b*.	Raspatory	1.75
14.	Hamilton's Levator	1.50
14*b*.	Cartilage Knife	2.00
15.	Liston's Artery Forceps	1.50
15*b*.	Langenbeck's Artery Forceps	1.50
16.	Butcher's Bow Saw	16.00
17.	Operating Scalpel, feruled	1.25
18.	Operating Scalpel	1.25
19.	Operating Scalpel	1.25
20.	Operating Scalpel	1.25
	Figs. 17, 18, 19, 20, ivory handles	1.50
	(See also Fig. 137, &c.)	
21.	Double Hook	2.50
	Double Hook, ivory handle	2.75
22.	Tenotome, sharp pointed	1.25
23.	Tenotome, blunt pointed	1.25
24.	Tenotome, convex edged	1.25

FIG.		PRICE
25.	Tenotome, concave edged	$1.25
	Figs. 22, 23, 24, 25, ivory handles	1.50
	Tenotome, plain	1.00
26.	Cooper's Hernia Knife	1.25
27.	Probe-pointed Bistoury	1.25
28.	Sharp-pointed Bistoury	1.25
29.	Straight Blunt-pointed Bistoury	1.25
30.	Finger Knife	1.25
	Figs. 26, 27, 28, 29, 30, ivory handles,	1.50
	(See also Figs. 139, &c., plain.)	
31.	Satterlee's Bone Forceps	2.50
32.	Aneurism Needle	1.25
	Aneurism Needle, ivory handle	1.50
33.	Tenaculum	1.25
	Tenaculum, ivory handle	1.50
	(Tenaculum, plain, see Fig. 136.)	
	Osteotomy Instruments.	
34.	Brainard's Drills, 5 in set	3.50
	Brainard's Drills, 3 in set	2.75
34*b*.	T. & Co.'s Drill Stock	7.00
35.	Hamilton's Bone Drills	7.00
36.	Howard's Bone Drills	7.00
36*b*.	Buck's Bone Drills	5.00
37.	Sand's Pereosteotome	2.50
38.	Sayre's Pereosteotome	2.00
	(Adams' Subcutaneous Section of Bone, see Supplement, Figs. 9, 10, 11, 12.)	
39.	Ferguson's Lion Jaw Forceps	3.00
39*b*.	Ferguson's Sequestrum Forceps	2.50
40.	Hamilton's Sequestrum Forceps	2.50
41.	Liston's Bone Forceps, best	3.00
	Liston's Bone Forceps, German steel,	2.50
	Liston's Bone Forceps, extra sizes	4.00 to 7.00
42.	Liston's Bone Forceps, curved on the flat	3.50
43.	Liston's Bone Forceps, angular curve	3.50
43*b*.	Hamilton's Serrated Bone Cutter	10.00
44.	Trepanning Elevator and Raspatory	1.25
44*b*.	Langenbeck's Bone Hook & Levator,	1.75

FIG.	PART I.	PRICE
45.	Plain Trepanning Elevator	$1.00
45*b*.	U. S. A. Raspatory	2.50
46.	Hoffman's Gouge Forceps	4.00
47.	Crown Trephine and Handle	4.00
48.	Galt's Trephine and Handle	4.50
49.	T. & Co.'s Trephine Handle	1.50
	Trephine Handle, plain	.75
50.	Pope's Antrum Drill	3.50
51.	Hey's Saw	1.75
52.	Hey's Saw	1.50
53.	Detmold's Metacarpal Saw	1.50
53*b*.	Farabeuf's Osteophor	7.00
53*c*.	Hamilton's Osteophor	4.00
53*d*.	Lewis' Folding Saw	2.50
54.	Szymanowski's Saw	20.00
55.	Chain Saw, best	10.00
	Chain Saw, plain	8.00
	(Link Saw, see Supplement, Fig. 54.)	
56.	Chain-Saw Carrier	2.00
57.	T. & Co.'s Circular Saw	12.00
58.	Lifting-Back Saw, small	2.50
	Lifting-Back Saw, small	3.00
	Lifting-Back Saw, medium	3.50
	Lifting-Back Saw, medium	4.00
	Lifting-Back Saw, large	4.50
59.	Trepanning Elevator and Lenticular	1.75
60.	Lente's Interosseous Saw	1.50
60*b*.	Buck's Chain-Saw Conductor	3.00
61.	Bone Drill, for ununited fractures	2.50
62.	Prince's Retractor	3.50
63.	Prince's Bone Staff	3.50
63*b*.	Blandin's Bone Staff	3.00
64.	Tirefond	2.00
	Tirefond, plain	1.50
65.	Maxillæ Saw	2 00
66.	Graefe's Circular Saw	20.00
67.	Maxillæ Saw	2.00
68.	Rib Shears (Costotome)	6 00
	Rib Shears, plain	5.00
69.	Isaac's Bone Forceps, small	4.00
	Isaac's Bone Forceps, large	5.50 to 7.00
70.	Goodwillie's Levator	2.00
71.	Goodwillie's Levator	2.00
72.	Brace Trepan and Crown	21 00
	Brace Trepan, without Crown	15.00
	Guarded Crown	6.00
73.	Mott's Retractors, pair	1.50
74.	Blackman's Retractors, pair	3.00
75.	Hand Trepan	2.50
76.	Parker's Retractors, pair	1.50
77.	Ferguson's Lion Forceps	3.50
78.	Heine's Saw	300.00
78*b*.	Hebra's Bone Scoop	2.50
78*c*.	Marshall's Osteotrite	2.50
79.	Darby's Rongeur	4.00

FIG.	PART I.	PRICE
80.	Curved Rongeur	$3.50
	Straight Rongeur	3.50
81.	Van Buren's Sequestrum Forceps	2.50
	Van Buren's Sequestrum Forceps, fine	3.00
82.	Markoe's Sequestrum Forceps	3.00
83.	Lead Mallet	2.50
84.	Gouge	1.50
84*b*.	Szymanowski's Gouge	2.50
85.	Curved Hand Gouge	1.50
86.	Chisel, various sizes	1.00 to 1.25
86*b*.	Linhardt's Knife Chisel	1.50
86*c*.	Darby's Set of Osteotomes	7.00

Arterial Instruments.

FIG.	PART I.	PRICE
87.	Speir's Artery Constrictor	4.00
88.	Prince's Tenaculum Forceps	6.00
89.	Stearn's Claws and Forceps	8.00
90.	Crampton's Artery Needles	5.00
91.	Wight's Artery Forceps	2.50
91*b*.	Bilroth's Artery Clamps	8.00
92.	Carroll's Knot Tyer	2.00
93.	Mott's Aneurism Needles	2.75
93*b*.	Post's Ligature Carrier	4.00
94.	Plain Aneurism Needle	.75
95.	Helical Needle	1.75
96.	Ligature Needle	1.00
97.	T. & Co.'s Hollow Needle	4.00
98.	Student's Aneurism Needle	3.00
98*b*.	Torsion Forceps	2.50
99.	Nott's Artery Clamp Forceps	6.00
100.	Hewson's Torsion Forceps	8.00
101.	Hamilton's Artery Forceps	2.50
102.	Milne's Artery Forceps	1.50
102*b*.	Phelp's Artery Forceps	4.50
103.	Spring-catch Artery Forceps, fenestrated	2.00
	Spring-catch Artery Forceps, plain	1.50
103*b*, *c*.	Serres-fins	.15
103*b*, *c*.	Serres-fins, steel	.25
103*d*.	Langenbeck's Serre-fin	.75
	Gross' Artery Compressor	5.00
104.	Petit's Spiral Tourniquet	2.00
104*b*.	Charrière's Tourniquet	2.50
105.	Prussian Field Tourniquet	.75
	U. S. A. Field Tourniquet	1.00
106.	Mott's Tourniquet	2.00
106*b*.	Gross' Tourniquet	12.00
107.	Field Tourniquet	1.00
108.	Erichson's Arterial Compressor	25.00
109.	Buck's Arterial Compressor	35.00
110.	Skey's Arterial Compressor	24.00
111.	Esmarch's Bandage Clamp	1.50
111*b*.	Langenbeck's Bandage Clamp	2.50
112.	Briddon's Compressor	30.00 to 60.00

FIG.	PART I.	PRICE
113.	May's Tourniquet	$15.00
114.	T. & Co.'s Tourniquet	2.00
114*b*.	Acupressure Pins	.25

Bullet Instruments.

FIG.	PART I.	PRICE
115.	U. S. A. Bullet Forceps	2.00
116.	Bullet Scoop, T. & Co.'s	1.75
117.	Bullet Seeker, burr head	1.00
118.	Moses' Bullet Extractor	3.50
119.	T. & Co.'s Bullet Screw	2.00
120.	Nelaton's Bullet Probe	.60
121.	Flexible Bullet Seeker	6.00
122.	Sayre's Bullet Probe	8.00
	Bill's Arrow Extractor (Fig. 6, Supplement)	2.50
123.	T. & Co.'s Bullet Forceps	2.25
123*b*.	Gross' Bullet Forceps	2.50
124.	Hamilton's Bullet Forceps	2.50
125.	Bullet Probe, silver	.75
126.	Hamilton's Director Probes	2.50
127.	Probe and Lint Carrier	.75
	Whalebone Bullet Probe	.60
	Lead Bullet Probe	.50
128.	Thomasin's Bullet Forceps	2.50

Minor Operating Instruments.

FIG.	PART I.	PRICE
129.	Plain Artery Forceps	1.00
	Plain Artery Forceps, small	.75
129*b*.	Wood's Artery Forceps	2.25
130.	Coxeter's Artery Forceps	1.00 to 1.25
130*b*.	Andrew's Artery Forceps	2.50
131*b*.	Spring-catch Artery Forceps	1.50
132.	Slide-catch Artery Forceps	2.50
133.	Spatula and Elevator	.60
134.	Hernia Director	2.50
135.	Exploring Director	1.00
135*b*.	Hunter's Director	.75
135*c*.	Hunter's Artery & Needle Forceps,	2.50
136.	Tenaculum, plain	.75
137.	Scalpel, plain	.80
138.	Scalpel, ivory	1.00
139.	Probe-pointed Bistoury	1.00
140.	Cooper's Hernia Knife	1.00
141.	Scalpel, ivory	1.00
142.	Finger Knife	1.00
143.	Sharp-pointed Bistoury	1.00
	Herniatome, Allis' (Fig. 35, Supplement)	7.00
	(For Bistouries, Scalpels, Tenotomes, &c., see also pages 4, 6, 48, 54.)	
144.	Peters' Hernia Director	2.50
145.	Hamilton's Dry Dissector	1.50
145*b*.	Hamilton's Dry Dissector	1.50
145*c*.	Hamilton's Dry Dissector	1.50

FIG.	PART I.	PRICE
145*d*.	Hamilton's Dry Dissector	$1.50
146.	Little's Large Scalpel	1.50
146*b*.	Little's Medium Scalpel	1.50
146*c*.	Little's Small Scalpel	1.50
146*d*.	Little's Tenaculum	1.50
146*e*.	Little's Aneurism Needle	1.50
147.	Little's Retractor	1.50
148.	Little's Pointed Bistoury	1.50
148*b*.	Little's Hernia Knife	1.50
148*c*.	Little's Probe Bistoury	1.50
148*d*.	Little's Straight Bistoury	1.50
149.	Artery Scissors	1.75
150.	Angular Operating Scissors	1.50
151.	Dissecting Scissors	.75, 1.00
152.	Scissors, curved on the flat	1.50
153.	Polypus Dressing Forceps	1.50
154.	Probe Director and Tongue-tie	1.00
154*b*, *c*, *d*, *e*.	Dugas' Caustic Case	5.00
155.	Parker's Comp'd Catheter, silver	4.50
	Parker's Comp'd Catheter, plated.	2.50
156.	Compound Catheter, silver	2.75
	Compound Catheter, plated	1.50
157.	Dressing Forceps	1.00 to 1.50
158.	Dressing Scissors	1.00 to 1.25
159.	Spatula, steel	.60
	Spatula, hard rubber	.60
159*b*.	Caustic Case, rubber and silver	1.00
159*c*.	Caustic Case, silver	1.50
	Caustic Case, seamless	2.50

Minor Operating Instruments for Pocket Cases.

PLAIN TORTOISE-SHELL HANDLES, SINGLE-BLADED, ANY SHAPE OF BLADE.

FIG.	PART I.	PRICE
160.	Pocket Instrument	1.00
161.	Seton Needle	1.00
162.	Double-bladed Pocket Instrument, any of the varieties of blades	1.50
163.	Torsion Forceps	2.50
164.	Thumb Lancet	.50
	Thumb Lancet, best	1.00
165.	Abscess Lancet	1.00
166.	Thumb Lancet	.50
	Thumb Lancet, best	1.00

TORTOISE-SHELL SLIDE-CATCH HANDLES.

FIG.	PART I.	PRICE
167.	Cooper's Hernia Knife	1.75
168.	Probe-pointed Bistoury	1.75
169.	Sharp-pointed Bistoury	1.75
170.	Scalpel	1.75
171.	Tenotome	1.75
172.	Gum Lancet	1.75
173.	Tenaculum	1.75

SPRING-CATCH TORTOISE-SHELL HANDLES.

FIG.	PART I.	PRICE
174.	Syme's Knife and Scalpel	2.75

FIG.	PART I.	PRICE
	All other Double-bladed Spring-catch Pocket Instruments, each.	$2.75
175.	Four-bladed Spring-catch Pocket Instrument	6.00
175*b*.	Gay's Open Ring Scissors	1.50
176.	Tenaculum and Gum Lancet	2.75

SLIDE-CATCH TORTOISE-SHELL HANDLES.

FIG.	PART I.	PRICE
177.	Scalpel and Probe Bistoury	2.50
178.	Silver Probes, pair	.75
179.	Tenaculum and Gum Lancet	2.50
180.	Post's and Buck's Needles	2.50
181.	Sharp Bistoury and Tenotome	2.50
	Any other combination of two blades in one handle, each	2.50
182.	Director and Aneurism Needle	.75
183.	Porte Méche	.40
184.	Director and Tongue-Tie	.60
185.	T. & Co.'s Patent Catch Pocket Instrument, single blade	1.75
	(Cleborne's Tenaculum Needle and Wire Twister Fig. 46, Supplement).	
186.	Stimson's Needle Forceps	3.50

Suture Needles.

FIG.	PART I.	PRICE
187.	Open-eyed Suture Needle	.25
188.	Curved Suture Needles	.10
189.	Half Curved Needles	.10
190.	Wire Suture Needles	.05
	Fine Needles, for operations on the eyes and lids, straight or curved,	.15
	Sims' Needles	.15
	Bozeman's Needles	.40
	Emmett's Needles	.15
	Dowell's Hernia Needle	.75
	Platt's Open-eyed Needle	.25

Cupping Instruments.

FIG.	PART I.	PRICE
191.	T. & Co.'s Patent Scarificator	7.00
192.	Ten-bladed Scarificator	4.00
	Ten-bladed Scarificator, 5.00; best,	6.00
193.	Glass and Rubber Cup	1.00
194.	Twelve-bladed Scarificator	$4.50, 5.00, 6.00, 7.00, 8.00
195.	Cupping Pump 3.00	
	Stopcock .50	
	Glass Cup, with brass fitting .60	
	Together	4.10
	Glass Cup, plain, per doz	1.50
	Tin Cup	.20

Leeching Instruments.

FIG.	PART I.	PRICE
196.	T. & Co.'s Patent Leech	7.00
197.	Heurteloup's Leech	8.00
	Reese's Leech (Fig. 8, Supplement),	4.50

Phlebotomy Instruments.

FIG.	PART I.	PRICE
198.	Plain Spring Lancet, brass	$1.50
199.	T. & Co.'s Spring Lancet	2.50
200.	Button-Trigger Spring Lancet	2.50
	Figs. 199, 200, German silver, in case; Fig. 200, if silver, in case,	4.00
	Thumb Lancets, best	.75 to 1.00
	Thumb Lancets, plain	.50

Counter Irritants.

FIG.	PART I.	PRICE
201.	Lebenswecker	2.50
	Baunscheidt's Oil, genuine	2.50
	Baunscheidt's Oil, imitation	1.50

Vaccinating Instruments.

FIG.	PART I.	PRICE
202.	T. & Co.'s Vaccinating Scarificator,	5.00
203.	Vaccinating Lancet	.75
204.	Dawson's Vaccinator	3.50
205.	Carroll's Vaccinator	.25
206.	Teller's Vaccinator	2.50
207.	Weir's Vaccinator and Comb	1.00
208.	Weir's Vaccinating Lancet	.75
209.	T. & Co.'s Vaccinating Trocar	2.50
	Vaccine on Quill Slips, in Capillary Tubes or Crusts, procured at the lowest market rates.	

Transfusion Instruments.

FIG.	PART I.	PRICE
210.	Aveling's Apparatus	4.50
	The same, with 1 Scalpel and 1 pair Forceps, in morocco case	8.00
211.	Fryer's Apparatus	6.50
212.	Garrigue's Apparatus	4.00

Hypodermic Syringes.

FIG.	PART I.	PRICE
213.	No. 0, in case	3.00
214.	No. 1, in case	4.00
215.	No. 2, in case	3.00
216.	No. 3, in case	2.50
217.	No. 4, in case	2.50
	No. 5, in case	3.00
218.	No. 6, Stimson's	3.00
219.	No. 7, Vance's, in case	4.50
	Morocco Case for Syringe	.50
	Metallic Case	.75
	Green's Hypodermic Case	12.00
220.	No. 8, T. & Co.'s Patent	2.50

EXTRA NEEDLES FOR HYPODERMIC SYRINGES.

FIG.	PART I.	PRICE
221.	Gold	1.00
	Steel	.50
	Steel, gilt	.75
	Steel, nickel-plated	.65
222.	T. & Co.'s Patent Bottle	.25
223.	Pinkham's Measure	.50
224.	T. & Co.'s Air-tight Bottle	.75

Diagnostic Instruments.

FIG.	PART I.	PRICE
225.	CLINICAL THERMOMETERS:	
No. 1.	Plain Bulbs, hard rubber case, length, 4 inches	$2.50
	Same, 5 inches	3.00
	Same, 6 inches, divided into fourths	3.50
	Same, *C* and *F*, 4 inches	4.50
No. 2.	Silver Sliding Case	3.50
	Silver Pencil Case	5.00
	German Silver Screw Case	3.00
No. 3.	Hawksley's Constricted Bulb, divided into fourths:	
	Silver Screw Case	4.50
	Hard Rubber Case	3.00
No. 4.	Dunster's Constricted Bulb, 3½ inches long, divided into half degrees:	
	Silver Case, in bayonet fitting,	4.50
No. 5.	Casella's Registering, divided into fifths, ivory scale, morocco case:	
	American manufacture	3.00
	English manufacture	7.00
Nos. 6 and 7.	Seguin's Case of 2 Surface and 1 Straight Self-Registering Thermometers	7.00
No. 8.	Pencil Case Thermometers	5.50
No. 9.	T. & Co.'s Patent Bent Thermometer, in case	3.50

Apparatus for Urinary Examinations.

FIG.	PART I.	PRICE
226.	Flint's Apparatus (Specified on page 77, Part I.)	70.45
227.	Graduated Measure Glass, 6 oz.	.75
228.	Urinometer	1.00
229.	Flask, Burner and Burette	4.75
230.	Urea Tube	2.00
231.	Retort Stand	1.50
231*b*.	Water Bath	2.60
231*c*, *d*.	Piffard's Water Oven	1.50
231*e*.	Bunsen Burner	1.50
232.	Piffard's Measuring Pipette	.50
232*b*.	Piffard's Fermentation Test	
233.	Graduated Tube, for analysis	1.50
234.	Mohr's Burette	2.00
234*b*.	Mohr's Stand	2.00
234*c*.	Mohr's Beaker, 2 oz.	.10
235.	Rapid Filter (Piffard's Extra Apparatus, specified on page 79, Part I.)	5.00
236.	Vance's Urine Test Case	6.00
	Ormiston's Urine Test Case	17.00
237.	Roberts' Urine Test Apparatus, improved by Lewis	25.00

Auscultation and Percussion Instruments.

STETHOSCOPES:

FIG.	PART I.	PRICE
238.	Flexible	$1.25
239.	Hawksley's	1.25
240.	Walsh's	1.00
241.	Barclay's	1.25
242.	Elliottson's	5.00
243.	Stokes'	1.00
244.	Dobell's	1.50
245.	Cedar	1.50
246.	Loomis'	1.75
247.	Cedar, ivory mounted	2.50
248.	Burrows'	2.25
249.	Quain's Telescopic	2.00
250.	Short Cedar	.75
251.	Arnold's, flexible	1.00
252.	Clark's	1.25
253.	Martin's Combination	5.00
254.	Cammann's Cylindr'l Auscultator.	1.25
255.	Cammann's Intracostal Auscultator	1.50
256.	Cedar, Vulcanite	1.50
257.	Ferguson's	1.50
258.	Glass Pleximeter	.50
259.	Hard Rubber Pleximeter	.40
260.	Percussor, whalebone stem	1.00
261.	Gerne's Pleximeter	2.50
262.	Ivory Pleximeter	1.00
263.	Winterich's Hammer	2.50
264.	Flint's Pleximeter	.35
265.	Flint's Percussor	.75

BINAURAL STETHOSCOPES:

FIG.	PART I.	PRICE
266.	Cammann's, with Snelling's Rubber Bell	4.50
267.	Speir's Echoscope	7.00
268.	Allison's Differential	6.00
269.	Knight's	7.50
270.	Davis'	5.00

Diagnostic Instruments.

FIG.	PART I.	PRICE
271.	Carroll's Stethometer	3.00
272.	Flint's Cyrtometer	15.00
273.	Cammann's Cardiometer	4.50
274.	Sieveking's Æsthesiometer	4.00
275.	Hammond's Æsthesiometer	3.00
276.	Carroll's Æsthesiometer	4.00
277.	Vance's Æsthesiometer	5.00
278.	Quain's Stethometer	15.00
279.	Marey's Sphygmograph	75.00
280.	Holden's Sphygmograph	
281.	Pond's Sphygmograph	35.00
282.	White's Hæmarheumoscope	2.50
283.	Dynamometer	8.00
284.	Beard's Piesmeter	8.50

FIG.	PART I.	PRICE
285.	Hamilton's Dynamometer	$3.00
286.	Dynamograph	75.00

Microscopic Instruments.

FIG.	PART I.	PRICE
287.	Microscope	45.00 to 100.00
288.	Duchenne's Trocar	2.50
288*b*.	Duchenne's Trocar	3.50
289.	Exploring Trocar	1.50
290.	T. & Co.'s Exploring Trocar	2.00
291.	Transplantation Scissors	6.50
292.	Noeggerath's Exploring Trocar	3.50
293.	Jewett's Section Cutter	9.00
294.	Curtis' Section Knife and Frame	15.00
	Curtis' Frame, only	12.00
	Curtis' Knife, only	3.50
295.	T. & Co.'s Valentine's Knife	8.00
296.	Piffard's Cutisector	5.00
297.	Section Knife	1.50
298.	Charrière's Section Knife	8.00
299.	Section Razor	2.00
300.	Microscopic Pocket Scalpel	1.00
301.	Microscopic Scalpel	.75
302.	Probe Microscopic Bistoury	1.25
303.	Sharp Microscopic Bistoury	1.25
304.	Spear Microscopic Knife	.75
305.	Small Microscopic Knife	.50
306.	Microscopic Needle	.75
307.	Needle Holder	1.25
308.	Curved Microscopic Forceps	1.00
309.	Straight Microscopic Forceps	.75
310.	Syringe, No. 0, in case	5.50
	Syringe, No. 0, brass, in case	6.50
311.	Syringe, No. 1, in case	10.00

Post Mortem Instruments.

FIG.	PART I.	PRICE
312.	Embalming Pump	22.00
313.	Anatomical Syringe, No. 1	40.00
	Anatomical Syringe, No. 2	30.00
314.	Steel Cartilage Knife	.60
315.	Dissecting Hook	.50
316.	Dissecting Double Hook	.50
317.	Darling's Chain Hook	.50
318.	Grappling Hook	.60
319.	Chain Hook	.25
320.	Reamer	1.00
321.	Rachitome, Chisel	2.00
322	Costotome, Chisel	1.50
323.	Blowpipe	.25
324.	Tripod Head Rest	3.00
325.	Darling's Scalpel	.75
	Darling's Scalpel, ivory	1.00
	Glazed Scalpel	.60
326.	Brain Knife	1.50
327.	Enterotome	2.50
328.	Calvarian Hook	1.50
329.	Post Mortem Knife, Saw & Handle	5.50

FIG.	PART I.	PRICE
330.	Post Mortem Hammer	$2.50
331.	Chisel	.50 to 1.50
332.	Finnell's Knife and Saw	4.50
333.	Double Rachitome	15.00

Instruments for Physiological Experiments.

CONTAINED IN FLINT'S ARMAMENTARIUM.

FIG.	PART I.	PRICE
334.	Portal Vein Ligator	1.75
335.	Forceps, for Spinal Canal	3.50
336.	Hey's Saw	1.75
337.	Dressing Forceps, with catch	2.00
338.	Drill, for Medulla Oblongata	1.75
339.	Bone Forceps, with rings	3.50
340.	Blunt Hook	1.25
341.	Nerve Knife	1.50
342.	Ventricle Pique	2.50
343.	Gastric Fistula Forceps	2.37
344.	Gastric Fistula Tube, No. 1	1.50
	Gastric Fistula Tube, No. 2	2.50
345.	Heart Catheter	1.00
346.	Long Dissecting Forceps	1.25
347.	Medium Dissecting Forceps	1.00
348.	Short Dissecting Forceps	.75
349.	Blowpipe	2.50
350.	Cartilage Knife	2.00
351.	Probe-pointed Scissors	1.25
352.	Lifting-back Saw, large	4.50
	Lifting-back Saw, medium	3.50
	Lifting-back Saw, small	2.50
	(Langenbeck's Serres-fins, Fig. 103, Part I.)	
	(Probe Bistoury, Fig. 17, Part I.)	
	(Scalpels, Figs. 17, 18, 19, Part I.)	
	(Artery Needle, Fig. 32, Part I.)	
	(Microscopic Needle, Fig. 306, Part I.)	
	(Tenotome, Fig. 22, Part I.)	

Electro-Therapeutic Instruments.

BATTERIES:

FIG.	PART I.	PRICE
353.	Stœhrer's Galvanic, 8 cells	20.00
	Stœhrer's Galvanic, 16 cells	30.00
	Stœhrer's Galvanic, 32 cells	55.00
354.	Gaiffe's Battery	10.00
	Gaiffe's Battery, nickel-plated	14.00
	Extra Trough	1.75
	Extra Zinc	.20
	Bisulphate Mercury, per oz.	.25
355.	Kidder's Tip-Battery	27.00
356.	No. 3 Galvano-Farradic Machine	22.00
	The same, nickel-plated	25.00
357.	Kidder's Family Battery	16.00
358.	Johnson's Monitor	20.00
359.	Kidder's Magneto-Electric Machine	10.00
360.	Hydro-Rheostat	10.00

FIG.	PART I.	PRICE
361.	VOLTAIC ARMADILLO:	
	Soles, per pair	$1.00
	Wrist Band	1.00
	Ankle Band	1.00
	Knee Band	2.25
	Head Band	2.00
	Arm Band	2.00
	Thigh Band	2.50
	Waist Band	5.00
362.	Garratt's Electric Disk	1.00, 2.50, 3.50, 5.00
	ELECTRODES:	
363.	Beard's, with Band	1.50
364.	Beard's, with Band and Cover	2.00
365.	Metallic Brush	1.50
366.	Spinal	2.00
367.	Sponge-Holder	1.50
368.	Side Sponge-Holder	1.75
369.	Piffard's, set	5.00
370.	Rectal, non-insulated	1.50
371.	Insulated Rectal	1.50
372.	Double Rectal	2.50
373.	Intra-Uterine	3.50
374.	Uterine	1.50
375.	Duchenne's Uterine	2.50
376.	Vaginal	1.75
377.	Intra-Uterine Galvanic Pessary	1.50
378.	Hank's Galvanic Pessary	1.50
379.	Insulated Catheter	1.25
380.	Duchenne's Vesica	2.50
381.	T. & Co.'s, set	11.00
382.	Nasal	1.50
383.	Beard's Stationary	5.00
384.	Universal Handle	3.00
385.	Duchenne's Pointed, pair	3.00
386.	Disks, to fit handle (Fig. 384)	.50 to 1.50
387.	Rockwell's Brass Ball	1.00
388.	Mackenzie's Laryngeal	3.50
389.	Beard's Current Changer	10.00
	ELECTROLYSIS CONDUCTORS.	
390.	Murray's Needle	1.25
391.	Rockwell's Long Needle	1.25
	T. & Co.'s Hard Rubber Covered Needles	1.25
392.	Trocar-pointed Needles:	
	Short	1.00
	Medium	1.25
	Large	1.50
	Platina points	1.75, 2.00, 2.50
393.	Rockwell's Needles, set	5.50
394.	Beard's Base Needle	.75

FIG.	PART I.	PRICE
	Galvano-Caustic Batteries and Electrodes.	
395.	Dawson's Battery	$60.00
396.	Dawson's Electrodes	35.00
397.	Cautery Sling	16.00
398.	Schröter's Electrode	16.00
	No. 1. Snare, platina wire	3.50
	No. 2. Lancet	3.00
	No. 3. Porcelain Burner	3.50
	No. 4. Knife	3.00
	No. 5. Voltolinis Knife	3.25
	No. 6. Blunt Cautery	3.00
	Anæsthetic Instruments.	
	ETHER INHALERS:	
399.	Lente's	3.50
400.	Squibb's	1.50
401.	Allis'	4.00
402.	Chisolm's	2.50
403.	Cheatham's	3.50
404.	Speir's, George's	3.50
405.	Morton's	5.00
406.	Junker's	12.50
	LOCAL ANÆSTHESIA.	
407.	Richardson's Spray	5.50
	Antiseptic Surgery Instruments.	
408.	Hank's Spray	15.00
409.	Weir's Spray	15.00
410.	Heuel's Spray	6.00
411.	Little's Spray	6.00
412.	Safety Tube-Cleaner	1.00
	Tube and Cleaner	2.50
	MATERIALS FOR THE ANTISEPTIC TREATMENT OF WOUNDS.	
	Lister's Antiseptic Gauze, 6 yds.	.90
	Lister's Silk Protective, per yd.	1.50
	McIntosh Cloth, per yd.	1.50
	Oiled Silk, per yd.	1.50
	Lister's Carbolized Catgut, per bottle	.75
	Borated Cotton, per pack	.25
	Van Brun's Cotton, per pack	.90
	Dennison's Absorbent Cotton, per pack	.30
	Animal Ligature, dry, per yd. coil,	.25
	Operating Furniture.	
413.	McIlroy's Table	125.00
414.	Knapp's Oculist's Chair	70.00
415.	McIlroy's Speculum Chair	70.00
416.	Bozeman's Chair	35.00
417.	Foster's Table	100.00

FIG.	PART I.	PRICE
	Pocket Medicine Cases.	
418.	Fuller's, style 1	$2.75
	Fuller's, style 2	3.00
	Fuller's, style 3	3.50
	Fuller's, style 4	5.00
	Minim Pipette, No. 1	.50
	Minim Measure, No. 2	.75
	Vial, corked, No. 3, per doz.	.35
	Vial, corked, No. 4, per doz.	.35
	Adhesive Vial Labels, per sheet	.03
419.	MEDICINE CHEST:	
	No. 1	12.00
	No. 2	15.00
	No. 3	18.00
	No. 4	6.00
	Medical Saddle Bags.	
420.	With 16 Vials	9.00
	With 20 Vials	9.50
	With 24 Vials	10.50
421.	With 16 Vials	6.00
	With 20 Vials	7.00
	With 24 Vials	8.00
422.	With 16 Vials	6.00
	With 20 Vials	6.50
	With 24 Vials	7.50

FIG.	PART I.	PRICE
	Osteological.	
423.	Skeleton, 1st grade	$60.00
	Skeleton, 2d grade	50.00
	Skeleton, 3d grade	40.00
	Skull, plain	7.50
	Skull, disarticulated ..... $9.00 to	18.00
	Female Pelvis, with ligaments	14.00
	Female Pelvis, without ligaments,	9.00
	Foot, on strings	3.50
	Hand, on strings	3.50
	Brass Screws	
	Aspirators.	
424.	Dieulafoy's, upright	40.00
	Dieulafoy's, large	50.00
425.	Dieulafoy's, Hospital	60.00
426.	Steurer's	35.00
427.	Emmett's	12.00
	Emmett's	16.00
	Peaslee's	8.00
428.	T. & Co.'s Aspirator	16.00
	T. & Co.'s Aspirator, small	13.00
429.	Higgins' Aspirator	25.00
430.	Codman's Aspirator	15.00
431.	Fitch's Handy Aspirator	5.00
	Thermo-Cautery.	
432.	Paquelin's	50.00

◆

Part II.

FIG.	PART II.	PRICE
	Eye Instruments.	
	FOR THE LIDS AND LACHRYMAL DUCTS.	
1.	Cross-bar Entropium Forceps	$2.25
2.	Laurence's Eye-lid Tourniquet	3.00
3.	T. & Co.'s Entropium Forceps	7.00
4.	Snellen's Entropium Forceps	2.50
5.	Desmarre's Entropium Forceps	3.00
	The same, with shell plate	3.00
6.	Jaeger's Plate Lid Holder, of hard rubber	1.00
	The same, of tortoise shell	2.00
7.	Henry's Depilator	2.50
8.	Entropium Forceps	7.00
9.	Cilia Forceps	1.00
10.	Ratti's Trichiasis Forceps	3.00
11.	Prout's Entropium Forceps	4.00
12.	Stokes' Lid Compressor	3.00
13.	Knapp's Entropium Forceps	4.00
14.	Galante's Eye Speculum	4.00
14*b*.	Liebreich's Eye Speculum	2.50
15.	Graefe's Eye Speculum	2.50

FIG.	PART II.	PRICE
16.	Wire Eye Speculum	$0.80
17.	Noyes' Eye Speculum, gilt	5.00
	Noyes' Eye Speculum, nickeled	4.50
18.	Noyes' Plain Speculum	1.75
19.	Liebold's Eye Speculum	2.50
	(Carron de Villard's Forceps, Fig. 85*b*.)	
20.	Hart's Eye Speculum	1.50
20*b*.	Wecker's Lachrymal Canula	1.30
21.	Desmarre's Retractor	1.75
22.	Desmarre's Retractor	1.75
23.	Weber's Graduated Dilator	1.00
24.	Speir's Lachrymal Catheter	1.00
25.	Anel's Eye Syringe, silver, silver and gold points, in case	12.00
	Anel's Eye Syringe, hard rubber, silver and gold points	5.00
26	McFarlan's Lachrymal Syringe, of hard rubber, with silver point	3.50
27.	Drop Glass, for the Eye	.20
28.	Liebold's Subpalpebral Syringe	1.50
29.	Agnew's Lachrymal Syringe	5.00
30.	Galezowsky's Canalicula Dilator	2.50

FIG.	PART II.	PRICE
30b.	Anel's Silver Probe	$0.50
31.	Bowman's Director	.75
	Bowman's Silver Probe, No. 1, 2	.75
	Bowman's Silver Probe, No. 3, 4	.75
	Bowman's Silver Probe, No. 5, 6	.75
	Bowman's Silver Probe, No. 7, 8	.75
	Bowman's Probe, hard rubber	.50
32a.	William's Probe, silver	.75
32b.	William's Probe, silver	.75
32c.	William's Dilator	1.00
32d.	William's Style	.50
32e.	William's Style	.50
33.	Levis' Probe	2.00
33b.	Noyes' Conjunctiva Forceps	3.00
34.	Liebreich's Probe and Fistula Knife	2.00
35.	Manfredi's Speculum	5.00
35b.	Test Drum	.75
36.	Noyes' Lachrymal Gouge	2.50
37.	Bowman's Knife	1.75
38.	Gensoul's Canula	3.00
39.	Desmarre's Scarificator	1.50
40.	Manoir's Scissors	1.50
	Manoir's Scissors	2.00
41.	Stilling's Canalicula Knife	1.50
42.	Weber's Curved Knife	1.75
43.	Weber's Half Curved Knife	1.75
44.	Desmarre's Cautery Iron	3.00
45.	Desmarre's Many-pronged Hook	2.00
46.	Noyes' Movable Canalicula Knife	4.00
47.	Noyes' Plain Canalicula Knife	1.75
48.	Parker's Fistula Lachrymalis Knife	1.75
49.	Jaeger's Bistoury Caché	8.00
50.	Beaumont's Concealed Knife	8.00
51.	Agnew's Canalicula Knife	1.75
52.	Sands' Needle Forceps	4.50
53.	Prout's Needle Forceps	3.50
54.	Scalpel	1.50
54b.	Scalpel	1.50
54c.	Scalpel	1.50
55.	Petit's Fistula Knife	2.00
56.	Noyes' Stilling Knife	1.75
56b.	Greenslade's Canalicula Knife	4.00
57.	Silver Style	.50
57b.	Canulated Style, silver	.75
57c.	Lachrymal Canula, silver	.50
57d.	Hard Rubber Style	.25
	Fine Suture Needles, for the eye	.15
	Suture Silk, china bead, per skein	.15
58.	Girard Teulon's Instrument	8.00

FOR STRABISMUS. (Ss.)

FIG.	PART II.	PRICE
59.	Straight Ss. Forceps	1.25
60.	Curved Ss. Forceps	1.25
61.	Strabometer, ivory	2.25
62.	Ss. Tenaculum	1.25
	The same, with eye near the point	$1.25
63.	Tenaculum	1.25
64.	Ss Scissors, curved flatwise	1.50
65.	Stout Ss. Forceps	1.25
66.	Half Curved Ss. Hook	1.25
67.	Ss. Double Hook, fixation	1.50
68.	Angular Ss. Scissors	1.50
69.	Ss. Hook-Bistoury	2.50
	Other Bistouries, delicate	1.50

OPHTHALMOSCOPES.

FIG.	PART II.	PRICE
70.	Liebreich's	4.50
	Liebreich's, extra fine	7.50
70b.	Loring's Student's Ophthalmoscope	22.00
71.	Loring's Double Disk	32.00
71b.	Loring's Single Disk	28.00
	Loring's, plain	9.00
72.	Dudley's	30.00
73b.	Knapp's Double Disk	35.00
73c.	Knapp's Metric System	32.00
74.	Knapp's Single Disk	20.00
	Allen's	3.50
	Nachét's	9.00

TRIAL GLASSES AND ACCESSORIES.

FIG.	PART II.	PRICE
75.	Pupillometer	5.00
76.	Thompson's Optometer	2.00
77.	Nachét's Trial Set, large	125.00
	Nachét's Trial Set, small	75.00
	Trial Glasses, cylindrical, spherical, and prismatic, in sets	25.00 to 100.00
77b.	Ophthalmo-Phantome	5.00
	Ophthalmo-Phantome	10.00
	Ophthalmo-Phantome	25.00
	Stenopaic Cylinders, circular perforation	3.50
	Stenopaic Cylinders, slits	1.00 to 3.00
	Graefe's Optometer	20.00
	Eye Goggles, per pair	1.50 to 3.00
	Eye Shades	.50 to 4.00
	Eye Protectors, plain ard colored mica	.75 to 1.50
	Eye Protectors, gauze and mica	1.50
	Magnified Preparation of the Eye, in papier-mache	45.00 to 60.00
	Artificial Eye, for experimenting and practicing in the use of the ophthalmoscope	30.00

FIXATION INSTRUMENTS.

FIG.	PART II.	PRICE
78.	Ball's Double Hook	3.00
79.	Double Fixation Hook	1.50
80.	Carron de Villard's Forceps	3.00
80b.	Tumor Forceps	1.50
80c.	Dudley's Fixation Forceps	3.00
80d.	De la Roza's Fixation Forceps	2.00

FIG.	PART II.	PRICE
80*e*.	Blitz's Extirpation Forceps	$3.00
80*f*.	Three-pointed Ophthalmostate	1.50
81.	Noyes' Fixation Forceps	2.00
82.	Pamard's Pique	1.50
83.	Jaeger's Ophthalmostate	8.00
84.	Noyes' Ophthalmostate	2.00
85.	Graefe's Fixation Forceps	2.00
85*b*.	Carron de Villard's Lid Forceps	4.00
	FOR REMOVING FOREIGN BODIES.	
86.	Dix's Spud	1.25
87.	Couching Needle	1.25
88.	Carron de Villard's Needle	1.25
89.	Angular Needle	1.25
90.	Gouge	1.50
91.	Spatula, German silver	1.25
	Spatula, hard rubber	.75
92.	Daviel's Curette	1.50
93.	Hard Rubber Spoon	.75
94.	Knapp's Foreign Body Hook	2.00
94*b*.	Pocket Spud and Needle	2.50
94*c*.	Pocket Gouge and Spatula	2.50
95.	Agnew's Eye-Douche	3.50
95*b*.	Stopcock, hard rubber	.75
95*c*.	Eye-Bath Glass	.50
95*d*.	Richardson's Spray	5.50
	Plain Hard Rubber Syringe	1.50
	(Eye Syringes, page 6, Part II.)	
	CONJUNCTIVA INSTRUMENTS.	
	(Tumor Forceps, Fig. 80*b*.)	
	(Double Hooks, Figs. 78, 79.)	
	(Scalpels, Fig. 54*a*, *b*, *c*.)	
96.	Scissors, curved flatwise	1.50
97.	Chadwick's Scissors	6.00
97*b*.	Knapp's Caustic Holder	1.00
	Silver Caustic Case	2.00
	Silver and Platina Caustic Case	3.50
	Hard Rubber Spatula (Fig. 91)	.75
	Silver Spatula	1.25
97*c*.	Child's Brush and Caustic Case	2.50
	Camel's Hair Brush	.05 to .15
	CORNEA AND IRIS INSTRUMENTS.	
97.	Chadwick's Scissors	6.00
98.	Desmarre's Paracentesis Trocar	1.75
99.	Paracentesis Needle	1.25
100.	Paracentesis Trocar	1.75
101.	Paracentesis Needle	1.25
	ARTIFICIAL PUPIL AND CATARACT INSTRUMENTS.	
102.	Jaeger's Straight Keratome	1.50
103.	Jaeger's Angular Keratome	1.75
104.	Agnew's Iridectomy Knife	1.75

FIG.	PART II.	PRICE
105.	Welker's Iridectomy Instrument	$12.00
105*b*.	De la Rosa's Iris Needle	1.75
106.	Straight Iris Forceps	1.50
107.	Tyrrell's Sharp Hook	1.25
108.	Tyrrell's Blunt Hook	1.25
109.	Althoff's Iridectomy Scissors	5.00
110.	Curved Iris Scissors	1.75
111.	Straight Iris Scissors	1.50
112.	Graefe's Angular Forceps	1.75
113.	Beer's Cataract Knife	1.50
114.	The same, medium size	1.50
115.	The same, large	1.50
116.	Cystotome	1.50
117.	Knapp's Cystotome	1.75
118.	Graefe's Linear Knife	1.50
	Liebreich's Linear Knife, narrow	1.50
119.	Graefe's Tractor	1.50
120.	Graefe's Lens Scoop	1.75
121.	Hard Rubber Spoon	.75
	Hard Rubber and Ivory Spoon	2.00
122.	Critchet's Hooked Needle	1.25
123.	Lazardi's Hooked Needle	1.50
124.	Silver Scoop and Cystotome	2.50
125.	Fenestrated Lens Scoop	1.75
125*b*.	Critchet's Flat Scoop	1.50
125*c*.	Critchet's Concave Scoop	1.75
126.	Strawbridge's Cataract Scissors	6.00
127.	Angular Section Bistoury	1.50
127*b*.	Wecker's Iridotomy Scissors	8.00
128.	Straight Section Knife	1.50
128*b*.	Dudley's Keratome Scissors	10.00
129.	Lanne's Forceps Needle	4.50
129*b*.	Baader's Linear Knife, right	2.00
129*c*.	Baader's Linear Knife, left	2.00
130.	Liebreich's Iris Forceps	6.50
131.	Walton's Iris Forceps	2.50
132.	Hayes' Knife Needle	1.50
133.	Iris Knife	1.50
134.	Iris Knife, with stop	1.75
135.	Sickle-shaped Iris Knife	1.75
136.	Knife Needle	1.50
137.	Noyes' Iris Scissors	4.50
138.	Wilde's Canulated Needle	12.00
139.	Wilde's Canulated Set	15.00
140.	Wilde's Canulated Forceps	12.00
140*b*.	Lens and Foreign Body Forceps	3.00
141.	Double-edged Iris Knife	2.00
141*b*.	Hall's Iris Scissors	6.00
141*c*.	Fischer's Iris Forceps	1.25
142.	Bowman's Stop Needle	1.50
143.	Beer's Cataract Needle	1.25
144.	Straight Cataract Needle	1.25
145.	Walton's Depression Needle	1.25
146.	Levi's Eyed Needle	1.75
147.	Walton's Grooved Needle	2.00

FIG.	PART II.	PRICE
148.	Tattoeing Needle	$1.75
149.	Baader's Tattoeing Needle	2.00
150.	Agnew's Tattoeing Needle	2.00
150*b*.	Agnew's Spring Tattoe	4.50
151.	Blanchet's Cataract Instrument	2.25
152.	Bowman's Cataract Instrument	4.50

Ear Instruments.

153.	Ear Piercer	1.50

FOR EXAMINATION OF THE MEATUS.

154.	Wilde's Gorget	1.00
155.	Troeltsch's Mirror	3.00
	Troeltsch's Mirror	4.00
156.	Wilde's Specula, 3, silver	4.00
	Wilde's Specula, 3, plated	2.50
	Wilde's Specula, 3, hard rubber	1.50
157.	Kramer's Speculum, steel	3.00
	Kramer's Speculum, plated	1.50
158.	Brunton's Otoscope	6.00
159.	Bivalve Speculum, German silver.	1.50
	Bivalve Speculum, German silver.	2.00
160.	Clark's Otoscope	12.00
161.	Knapp's Specula, 3, silver	4.50
	Knapp's Specula, 3, plated	3.00
162.	Gruber's Specula, 3, rubber	1.50
	Gruber's Specula, 1	.50
163.	Toynbee's Specula, 3, silver	4.50
	Toynbee's Specula, 3, plated	2.50
164.	Simrock's Otoscope	4.00
165.	Speir's Self-retaining Speculum	3.00
165*b*.	Milikin's Self-retaining Speculum,	1.50
166.	Hassenstein's Otoscope	5.00

FOR MEMBRANA TYMPANI, &C.

167.	Artificial Tympanum	.30
168.	Gruber's Polypus Knife	1.50
169.	Simrock's Scissors	4.50
170.	Politzer's Angular Perforator	1.00
171.	Politzer's Perforator, straight	1.00
	The same, with ivory handle	1.50
172.	Politzer's Eyelet Forceps	1.50
	Politzer's Eyelets	.30

FOR THE EUSTACHEAN TUBES.

173.	Bonafont's Catheter Holder	2.00
174.	Pomeroy's Catheter Holder	3.50
174*b*.	Wire Nose Clamp	1.00
175.	Politzer's Meatus Knife	1.50
176.	Eustachean Catheter, hard rubber,	.75
	Eustachean Catheter, pure silver.	1.50
	Eustachean Catheter, coin silver.	1.25
	Eustachean Catheter, nickel plated	.75
177.	Gruber's Tympanitome	3.00
178.	Weber's Tympanitome	8.00
179.	Politzer's Air Bag	2.00 to 3.50

FIG.	PART II.	PRICE
180.	Roosa's Politzer Bag, rubber	$3.50
	Roosa's Politzer Bag, metal	4.50
181.	Buttles' Inhaler	2.50
182.	Sexton's Nozzle, for Politzer Bag.	1.00
183.	Füllgraff's Spray	6.00
184.	Hackley's Spray	6.50
184*b*.	Ely's Otoscope	7.00

DIAGNOSTIC INSTRUMENTS.

185.	Angular Ear Probe	.75
186.	Politzer's Manometer	.75
187.	Toynbee's Diagnostic Tube	.75
188.	Siegle's Aural Speculum	4.00
189.	Toynbee's Explorer	.75
190.	Eustachean Catheter, rubber	.75
	Eustachean Catheter, pure silver.	1.50
	Eustachean Catheter, coin silver.	1.25
	Eustachean Catheter, plated	.75
191.	Conversation Tube	3.00 to 16.00
192.	Tuning Fork, *A*	.75
	Tuning Fork, *C*	1.50
193.	Blake's Inner Ear Mirror	8.00
193*b*.	Gruber's Scissors	4.00
194.	Buck's Ear Instruments:	
a.	Curette	.75
b.	Cotton Holder	.50
c.	Silver Probe	.60
d.	Mastoid Knife	1.50
e.	Port Acid Glass	.15
f.	Silver Probe	.75
g.	Bistoury, blunt	1.50
h.	Maryngotome	1.00
i.	Furuncle Knife	1.50
k.	Pointed Bistoury	1.50

FOR REMOVING FOREIGN BODIES.

194*l*.	Politzer's Spoon	.75
195.	Allen's Polypus Forceps	4.50
196.	Politzer's Polypus Forceps	2.50
197.	Blake's Polypus Snare	3.50
198.	Wilde's Polypus Snare	3.50
199.	Bumstead's Canulated Forceps	4.00
200.	Elastic Caustic Holder	2.00
201.	Speir's Curette	1.25
202.	Fenestrated Ear Scoop	1.50
203.	Angular Ear Hook	1.50
204.	Devils' Screw Hook	1.75
204*b*.	Noyes' Ear Forceps	4.50
205.	Elsberg's Screw Hook	2.00
206.	Gross' Spoon and Hook	.75
207.	Hinton's Polypus Forceps	4.00
207*b*.	Hinton's Polypus Forceps, double joint	4.50
207*c*.	Pomeroy's Ear Forceps	2.50
207*d*.	T. & Co.'s Forceps and Reflector.	4.50

FIG.	PART II.	PRICE
207*e*.	T. & Co.'s Universal Ear Forceps	$5.00
207*f*.	Avery's Ear Forceps	4.50
207*g*.	Blake's Inner Ear Syringe	4.50
208.	Pus Basin, large, hard rubber	3.00
	Pus Basin, medium	2.50
209.	Pus Basin, small	2.00
	Pus Basin, brass	3.00 to 4.00
210.	Lucae's Reflux Douche	1.50
210*b*.	Donder's Ear Spout	.75
211.	Up de Graff's Spout	1.50
212.	Knapp's Powder Blower	1.50
212*b*.	Bag Ear Syringe	.75
213.	Kramer's Ear Syringe	1.50
	Same, nickel-plated, with stop-cock	4.50
214.	H. R. Ear Syringe, small	1.25
	H. R. Ear Syringe, large	2.50
215.	Sexton's Ear Douche	6.00
215*b*.	Hosner's Ear Spout	.75
215*c*.	Ear Spout and Hose	1.00
215*d*.	Buck's Ear Nozzle	.75

MASTOID PROCESS INSTRUMENTS.

FIG.	PART II.	PRICE
216.	Drill Stock, 3 drills	7.00
216*b*.	Buck's Drills	3.00
217.	Post's Rongeur	3.00
218.	Hand Gouge	1.50
218*b*.	Burnett's Knife	1.50

EAR TRUMPETS.

FIG.	PART II.	PRICE
219.	Silver Cornets, per pair	2.50
219*b*.	Silver Cornets, per pair	3.00
219*c*.	Artificial Tympanum	.30
220.	German Silver Ear Trumpet	6.00
221.	Bronzed & Japanned Ear Trumpet,	3.00
222.	The same	2.25, 3.00, 3.50, 4.00
223.	The same	4.00
224.	The same	3.25, 3.00, 3.50
	German Silver Ear Trumpet	3.50, 4.00, 4.50, 5.00
225.	Dipper Trumpet	4.50
226.	Dipper Trumpet	4.50
227.	Dionysius' Ear	8.00 to 16.00
228.	Conversation Tube, plain	3.00
	Conversation Tube, silk	6.00
	Conversation Tube, ivory	8.00
	Conversation Tube, large, ivory	16.00
229.	Auricles	5.00
230.	Telescopic, German silver	4.50
231.	Cane Trumpet	6.00 to 25.00
232.	Ear Trumpet, bronzed & japanned,	2.50
	The same	3.00
	The same	3.50

Nasal Instruments.

FIG.	PART II.	PRICE
233.	Robert & Collins' Nasal Speculum, in German silver	3.50
	Robert & Collins' Nasal Speculum, in hard rubber	$2.50
233*b*.	Goodwillie's Nasal Speculum	1.00
234.	Bivalve Nasal Speculum	2.00
235.	Elsberg's Nasal Speculum	5.00
236.	Steel Nasal Speculum	2.50
237.	Fraenkel's Nasal Speculum	3.50
238.	Folsom's Nasal Speculum	1.50
239.	Tudichum's Nasal Speculum	1.50
239*b*.	Rubber Tampon	.75
239*c*.	Caro's Nasal Clamp	1.75
239*d*.	Clark's Nasal Douche	1.50
239*e*.	Zaufal's Nasal Specula, set	3.00
	Zaufal's Nasal Specula, each	1.00
239*f*.	Posterior Nares Syringe	1.50
239*g*.	Bennett's Syringe	5.50
240.	Tudichum's Douche	1.50
240*b*.	Simrock's Nasal Speculum	1.50
240*c*.	Bonafont's Nasal Speculum	2.50
241.	Polypus Forceps	2.00
242.	Polypus Forceps	2.25
	Polypus Forceps, plain	1.50
243.	Gross' Polypus Forceps	2.25
244.	Simrock's Polypus Forceps	2.50
245.	Polypus Canula	1.50
	Polypus Canula, silver	2.00
246.	Belocq's Canula	2.50
	Belocq's Canula, silver	3.00
247.	Simrock's Rhinoscope	8.00
248.	Duplay's Rhinoscope	8.00
249.	Rhinoscopic Mirror	1.25
250.	Füllgraff's Nasal Douche	3.50

Harelip Instruments.

FIG.	PART II.	PRICE
251.	Buck's Pin Conductor	1.50
	Buck's Pin Conductor, plain	1.00
252.	Hutchison's Harelip Forceps	3.00
253.	Prince's Harelip Clamp	3.00
254.	Scalpel	.75
	Scalpel	1.00
255.	Scalpel, with ferule	1.50
256.	Angular Scissors	1.50
	Angular Scissors, heavy	2.50
257.	Hamilton's Harelip Scissors	2.25
257*b*.	Plastic Pins, per 100	.50
257*c*.	Plastic Pins, movable points, each	.50
257*d*.	Post's Pin Conductor	.75
258.	Smith's Harelip Forceps	6.00
258*b*.	Parallel Harelip Forceps	9.00

Specula Oris.

FIG.	PART II.	PRICE
259.	Mussey's Gag	7.00
259*b*.	Goodwillie's Gag	3.00
259*c*.	Clover's Gag	3.50
260.	Gross' Speculum Oris	5.00

FIG.	PART II.	PRICE
260*b*.	Oral Screw, hard rubber	$1.00
261.	Whitehead's Gag	12.00
261*b*.	Whitehead's First Gag	10.00
262.	Heister's Speculum Oris	6.00
263.	Westmoreland's Speculum Oris	6.00
264.	Goodwillie's Speculum Oris	8.00

Tongue Holders.

265.	Dobell's Forceps	6.00
265*b*.	Pocket Tongue Depressor	1.00
266.	Hard Rubber Depressor	1.50
267.	Elsberg's Tongue Depressor	4.50
268.	Green's Folding Depressor	2.50
	Green's Depressor, plain	1.50
269.	Sass' Tongue Depressor	3.50
270.	Türk's Depressor	4.50
271.	Folding Tongue Depressor	1.25
	Plain Depressor, steel	1.00
272.	Church's Tongue Depressor	6.50
272*b*.	Cusco's Tongue Forceps	4.50

Tonsil and Uvula Instruments.

273.	Tenaculum Forceps	2.50
273*b*.	Yearsley's Tonsil Knife	2.00
274.	Musseux's Forceps	2.50
275.	Langenbeck's Seizing Forceps	3.00
276.	Durham's Seizing Forceps	4.50
277.	Tonsil Hook	2.00
278.	Billing's Tonsilotome	12.00
279.	Green's Tonsil Bistoury	2.00
	Green's Tonsil Bistoury, with ferule	2.25
280.	T. & Co.'s Uvulatome	8.00
281.	Green's Double Hook	3.00
	Green's Double Hook, plain	2.50
282.	Vulsellum	2.25
283.	Uvula Scissors, with claws	5.00
283*b*.	Mackenzie's Tonsilotome, handle and one blade	9.00
	Each extra blade	6.00
284.	Tonsil Scissors	4.50
	Tonsil Scissors, short	3.00
285.	Hamilton's Tonsilotome	15.00
286.	T. & Co.'s Tonsilotome	15.00
	Each extra blade	9.00
287.	Fahnestock's Tonsilotome	8.00
288.	Mathieu's Tonsilotome	12.00
	Buck's Lancet (Fig. 326)	2.50
	Graefe's Forceps	1.50
	Mackenzie's Cauterizer	8.00

Staphylorrhaphy and Uraniscoplastic Instruments.

FIG.	PART II.	PRICE
289.	Whitehead's Seizing Forceps	4.50
290.	Curved Scissors	4.50
291.	Whitehead's Paring Knife	$1.50
292.	Whitehead's Hoe	1.50
293.	Sayre's Periosteotome	2.00
294.	Tenaculum	1.50
295.	Whitehead's Spiral Needle	1.75
296.	Whitehead's Gum Knife	1.50
297.	Sims' Adjuster	1.50
297*b*.	Sims' Twisting Forceps	4.00
298.	Luer's Cheek Retractor	2.00
298*b*.	Right Side Retractor	1.50
	Left Side Retractor	1.50

LANGENBECK'S INSTRUMENTS (*c* TO *l*):

298*c*.	Narrow Double-edge Knife	2.50
298*d*.	Wide Double-edge Knife	2.50
298*e*.	Wide Double-edge Knife, button	2.50
298*f*.	Single-edge Knife	1.75
298*g*.	Single-edge Knife	1.75
298*h*.	Single-edge Knife	2.00
298*i*.	Tenaculum	1.50
298*k*.	Retractor	2.50
298*l*.	Suture Holder	3.00
299.	Staphylorrhaphy Knife, single	2.50
300.	Staphylorrhaphy Knife, double	2.50
301.	Cheek Retractor	3.00
302.	Goodwillie's Levator	2.00
303.	Goodwillie's Oral Saw	3.50
304.	Goodwillie's Levator	2.00
305.	Seizing Forceps	2.50
	Langenbeck's Raspatory	1.50

Laryngoscopic Instruments.

306.	Roe's Laryngoscope	45.00
307.	Henry's Bull's-eye Laryngoscope	9.00
308.	Laryngoscopic Mirror	1.25
309.	Mirror and Head-Band	8.00
310.	Mirror and Head-Band, small	6.50
311.	Tobold's Laryngoscope	24.00
	Tobold's Laryngoscope, pocket	15.00
	Student's Lamp, extra	6.00
312.	Seeger's Laryngoscope	34.00
312*b*.	Schroetter's Laryngoscope	8.00
	Schroetter's Laryngoscope, small	6.50
313.	Mackenzie's Light Concentrator	9.00
314.	Elsberg's Pocket Laryngoscope	6.00
315.	Pocket Illuminator	4.50
315*b*.	Collin's Lamp	7.00
316.	Tobold's Knife, lanciform	1.50
317.	Tobold's Knife, convex	1.50
318.	Tobold's Knife, concave	1.50
319.	Grant's Œdema Glottis Instrument	1.50
320.	Tobold's Lancet	4.00
321.	Haywood Smith's Scissors	12.00
322.	Mackenzie's Three Lancets	14.00
322*b*.	The same, 2 blades	12.00

FIG.	PART II.	PRICE
	Laryngeal and Œsophageal Instruments.	
323.	Mackenzie's Laryngeal Forceps, Scissors and Ecraseur	$25.00
324.	T. & Co.'s Movable Point Scissors,	12.00
325.	Schrœtter's Lancet and Forceps	15.00
326.	Buck's Throat Lancet	2.50
327.	Buck's Throat Forceps	3.00
328.	Cusco's Throat Forceps	6.00
329.	Simrock's Laryngeal Forceps	4.50
330.	Braun's Epiglot is Forceps	4.50
331.	Burge's Throat Forceps	4.50
332.	Fauvel's Polypus Forceps	4.00
333.	Mathieu's Throat Forceps	6.00
334.	Schaffer's Scoop	8.00
335.	T. & Co.'s Scoop	6.00
336.	Bristle Probang	1.50
	Bristle Probang	2.50
337.	Probang and Bucket	3.50
337*b*.	Dilators, for Œsophageal Stricture, '	4.00
338.	Gibb's Ecraseu	3.00
338*b*.	Roe's Uvula Hook	2.50
339.	California Brush Holder	2.00
340.	Finger Sponge Holder	1.50
341.	Granger's Sponge Holder	2.00
342.	Buck's Sponge Holder	1.50
343.	Childs' Brush and Caustic Holder,	2.50
344.	Twelve Brushes and Holder	2.00
345.	Caustic Carrier	2.50
346.	Lente's Probe	1.25
347.	Seeger's Brush Holder	2.50
347*b*.	Ruppaner's Brush Holder	.75
348.	Elsberg's Insufflator	2.00
349.	Wagner's Brush Holder	2.50
349*b*.	Noyes Brush Holde	2.25
350.	Powder Blower	1.50
351.	Clay's Powder Blower	2.00
352.	Leffert Powder Blower	2.00
352*b*.	The same, with mouth-piece	1.75
353.	Gibb's Spray	3.00
354.	Stork's Drop Tube	2.25
355.	Tobold's Syringe	2.50
356.	Fullgraff's Laryngo-Tracheal Douche	6.00
357.	Fullgraff's Flat-Bill Spray	6.00
358.	Fullgraff's Glass Powder Tubes, each	.20
359.	Fullgraff's Posterior Nares Douche	3.00
	Inhaling Apparatus.	
360.	Bergson's Steam Atomizer	4.50
361.	T. & Co.'s Steam Atomizer	5.00
362.	Seeger's Steam Atomizer	12.00
363.	Richardson's Spray, 1 point	5.50
	Richardson's Spray, 2 points	6.00
364.	Sass' Spray	6.00
364*b*.	Sass' Spray, with Receiver and Pump	$35.00
	Sass' Spray, large size	45.00
364*c*.	T. & Co.'s Universal Syringe	10.00
364*d*.	Warner's Douche	1.75
364*e*.	Chapman's Spray, 3 points	6.50
364*f*.	Ramage's Inhaler	1.25
364*g*.	Robinson's Powder Blower	3.00
365.	Newman's Atomizer	5.00
366.	Hunter's Inhaler	1.50
367.	Jeffrey's Respirator	3.00
	Jeffrey's Respirator, for Mouth and Nose	4.00
	The same, plain	2.50
367*b*.	Roe's Inhaler	2.00
367*c*.	Schofield's Inhaler	2.00
367*d*.	Mackenzie's Inhaler	6.00
367*e*.	Croup Kettle	5.00
368.	Dobell's Residual Air Pump	3.00
368*b*.	Hot Air Bath	5.00
	Tracheotomy Instruments.	
369.	Buck's Tracheotomy Guide	2.00
369*b*.	Well's Tracheotomy Retractor	2.00
369*c*.	Rose's Tracheotomy Retractor	1.00
370.	Langenbeck's Double Hook	3.00
371.	Tracheotomy Scalpel, bluntpointed	1.50
372.	The same, sharp pointed	1.50
373.	T. & Co.'s Tracheotome	3.50
374.	Pitha s Tracheotome	3.50
375.	Tracheotomy Blunt Hook	1.50
376.	Langenbeck's Tracheotome	4.00
376*b*.	Pilcher's Retractor	2.00
377.	Trousseaux Tracheotomy Dilator	2.50
378.	Delaborde' Tracheotomy Dilator	5.00
378*b*.	Tardieu's Tracheotomy Scissors	5.00
379.	Chassaignac's Tracheotomy Dilator	3.00
379*b*.	Finger Protector	2.00
380.	T. & Co.'s Universal Forceps	2.50
381.	Silver Trachea Canula, single	4.00
381*b*.	Hank's Tracheotome	9.00
382.	Double Trachea Tube, silver	7.00
383.	Double Trachea Tube, silver	6.00
384.	Canula Mop	.75
385.	Trachea Canula, hard rubber	2.50
386.	Gendron's Canula, silver	8.00
387.	Trousseaux's Canula Forceps	3.50
388.	T. & Co.'s Tracheal Forceps	4.50
389.	Johnson's Canula	10.00
390.	T. & Co.'s Tracheal Aspirator	2.50
391.	Trendelenburg's Trachea Tampon,	12.00
	Spirometers and Pneumatic Apparatus.	
392.	Richardson's Artificial Respirator,	4.50
393.	Waldenburg's Apparatus	75.00

FIG.	PART II.	PRICE
394.	Tobold's Apparatus	$65.00
395.	Waldenburg's Pneumatometer	8.00
396.	Brown's Spirometer	12.00
397.	Fraenkel's Apparatus	15.00
398.	Barne's Spirometer	12.00
399.	Hutchinson's Spirometer	32.00

Stomach Pumps and Tubes.

FIG.	PART II.	PRICE
400.	Lever Stomach Pump	16.00
401.	T. & Co.'s Stomach Pump	$10.00
402.	Toswill's Stomach Pump	2.50
403.	Paine's Nasal Feeding Tube	1.00
404.	Funnelled Feeding Tube, English,	1.50
	Funnelled Feeding Tube, French.	1.00
	T.& Co.'s Velvet Eye Stomach Tube	1.50
405.	Rectal Feeding Tube	1.50
406.	Masticator	8.00
	Masticator	12.00

◆

Part III.

Instruments for the Male Urethra, Bladder and Genitals.

Phymosis Instruments.

FIG.		PRICE
1.	Fisher's Phymosis Forceps	$3.00
	Ricord's Phymosis Forceps	4.00
2.	Roger's Phymosis Forceps	3.00
3.	Henry's Phymosis Forceps	4.50
4.	Probe and Spatula	1.00
5.	Taylor's Phymosis Scissors	5.00
6.	Hutchison's Phymosis Forceps	2.25
7.	Scissors, curved	1.50

Urethral Diagnosis Instruments.

FIG.		PRICE
8.	Weir's Meatoscope	1.25
8*b*.	Skene's Folsom's Speculum	1.50
8*c*.	Otis' Meatus Dilator	1.50
9.	Désormeaux's Endoscope	60.00, 125.00
10.	Otis' Endoscopic Tube	1.50
11.	Skene's Urethral Speculum	3.00
11*b*.	Laveur's Endoscope	20.00
	Skene's Endoscope (Fig. 59, Supplement)	2.75

Scales and Guages for Urethral Instruments.

FIG.		PRICE
12.	Gouley's Metrical Guage	2.00
13.	American Scale, steel	4.00
	American Scale, pasteboard	gratis
14.	Otis' Metric Scale	4.00
	Henderson's Scale	6.00
14*c*.	Spermatorrhœa Ring	.75

Urethral Sounds.

FIG.		PRICE
15.	Conical Sound, nickeled	1.50
	Cylindrical Sound, nickeled	1.00
	Van Buren's Sound, nickeled	1.50
	Gouley's Sound, nickeled	1.50
	Benique's Sound	2.50
	Sound, flexible metal	.50
	Benique's Sound, metal	1.00
16.	Straight Sound, nickeled	$1.00
	Straight Sound Bougies, nickeled	1.25
	Straight Sound Bougies, metal	.75

Instruments for Exploring Strictures of the Urethra.

FIG.		PRICE
17*1*.	Bougie à Trois Nœuds	1.25
2.	Mallez's Bougie à Boule	1.25
3.	Dick's Bougie à Boule	1.00
4.	Bougie Conique	.75
5.	Bougie Olivaire	.75
6.	Bougie Conique à Ventre	1.25
7.	Bougie Olivaire à Ventre	1.25
8.	Olivary Whalebone Bougie	.50
9.	Filiform Bougie	.75
10.	Mallez's Insufflator	1.75
11.	Mercier's Elbow Catheter	1.00
12.	Mercier's Sonde Bicoudée	1.25
	(Other Gum Elastic Bougies in endless variety, single or by the dozen, prices according to quality.)	
18.	Glass Meatoscope, white	.50
	Glass Meatoscope, silvered	.75
19.	Gouley's Meatotome	3.00
20.	Filiform Bougie, gum	.75
	Filiform Crain de Florence	.75
21.	Gouley's Guide	.50
22.	Thompson's Bougie	1.50
23.	Bougie, three knots	1.25
23*b*.	Bell's Ball Probe	1.25
23*c*.	Bougie à Boule	1.00
24.	Gouley's Tunnelled Sound	2.50
25.	Otis' Bougie à Boule (No. 8 to No. 40) each	.50

Catheters.

FIG.		PRICE
	Squire's Vertebrated Catheter	6.00
26.	Caro's Vertebrated Catheter	7.00
27.	Bumstead's Retention Catheter	4.00

FIG.	PART III.	PRICE
28.	Cowan's Vertebrated Catheter	$8.50
29.	Silver Prostatic Catheter	2.25 to 3.50
	Virgin Silver Catheter	3.50 to 5.00
30.	Olivary Gum Catheter	.85
31.	Thompson's Retention Catheter	3.00
32.	Holt's Self-retaining Catheter	1.50
33.	Holt's Self-retaining Catheter	1.50
34.	Dowse's Self-retaining Catheter	1.50
35.	Hutchinson's Prostatic Catheter	3.00 to 4.00
36.	Otis' Prostatic Guide	1.00
37.	Mercier's Bicoudée Catheter	1.25
38.	Holt's Self-retaining Catheter	1.50
39.	Mercier's Elbowed Catheter	1.00
39*b*.	Keye's Catheter Guide	.75
40.	Nelaton's Catheter, soft rubber	.50
	Jaques' Catheter, soft rubber	.75
	T. & Co.'s Patent Velvet Eye Catheter	.75
41.	Thompson's Rubber Catheter	2.00
42.	Teevan's Tunnelled Catheter and Guide	3.00
43.	Thompson's Prostate Sound and Tube	10.00
44.	Harrison's Pessary Catheter	4.00
44*b*.	Hüter's Flat Catheter	2.00
44*c*.	Gross' Flexible Catheter	2.00
45.	Parker's Compound Catheter, silver,	4.50
	Parker's Compound Catheter, plated	2.50
46.	Catheter Holder	.50
47.	Compound Catheter, silver	2.50
	Compound Catheter, plated	1.50

Urethral Syringes and Applicators.

48.	Long Pipe Urethral Syringe, hard rubber	1.25
49.	Lallemand's Port-Caustique, silver.	4.50
50.	Bumstead's Syringe	2.50
51.	Ointment Bougie	2.00
52.	Bigelow's Catheter Syringe	6.00
53.	Van Buren's Cupped Sound	2.00
54.	Dick's Caustic Syringe	3.50
55.	Buttle's Syringe	5.00
56.	Otis' Syringe Nozzle	1.50
57.	Taylor's Syringe	4.00
58.	Otis' Catheter Syringe	4.50
59.	Wheelock's Syringe	1.25
60.	Bumstead's P. P. Syringe	.75
61.	Parker's Catheter Syringe	3.50
62.	Sigismund's P. P. Syringe	1.50
63.	Hard Rubber P. P. Syringe	.75

Urethral Stricture Divulsors and Dilators.

64.	Thompson's Divulsor	12.00
65.	Stearn's Dilator	5.00

FIG.	PART III.	PRICE
66.	Holt's Divulsors, in case	$18.00
	The same, Bumstead's modification	20.00
67.	Gouley's Divulsor	12.00
	Gouley's Divulsor, in case	14.00
68.	Minor's Dilators, set of 4 filiform Bougies and 2 Canulas	3.50
69.	Burge's Straight Dilator	10.00
70.	Corradi's Dilator	12.00
71.	Gouley's Over-Distender	12.00
72.	Burge's Curved Dilator	10.00
73.	Voillemier's Dilators	20.00
	Voillemier's Dilators, in case	22.00
74.	Bumstead's Holt Dilators	18.00
	Bumstead's Holt Dilators, in case.	20.00
75.	Thebeaud's Dilator	10.00

Internal Urethrotomy Instruments.

76.	Civiale's Bistoury Caché	6.00
77.	Gouley's Tunnelled Urethrotome.	5.00
78.	Peter's Urethrotome	6.00
79.	Mastin's Urethrotome	14.00
80.	Gross' Urethrotome	6.00
81.	Otis' Dilating Urethrotome, No. 1.	30.00
82.	Otis' Dilating Urethrotome, No. 2.	30.00
83.	Voillemier's Urethrotome	16.00
84.	Civiale's Urethrotome	12.00
85.	Trelat's Urethrotome	16.00
86.	Bumstead's Maisonneuve	14.00
	The same, cutting inside	14.00
87.	Charrière's Stricture Cutter	12.00
88.	Mastin's Stricture Cutter	8.00
89.	Gouley's Improved Tunnelled Urethrotome	12.00
90.	Gouley's Dilating Urethrotome	15.00
91.	Geo. K. Smith's Urethrotome	25.00
92.	Otis' Dilating Urethrotome, No. 4.	30.00
93.	Otis' Dilating Urethrotome, No. 3.	30.00
94.	Otis' Urethrameter	18.00
95.	Bumstead's Urethrotome	50.00
96.	Whitehead's Staff and Knife	12.00
97.	Otis' Bulbous Urethrotome	12.00
98.	Westmoreland's Stricture Instrument	12.00
99.	Whitehead's Urethrotome	15.00
100.	Teevan's Stricture Cutter	13.00

External Urethrotomy Instruments.

101.	Gouley's Staff Catheter	2.50 to 3.00
101*b*.	Gouley's Whalebone Guide	.50
101*c*.	Gouley's Director, silver	1.50
101*d*.	Gouley's Beaked Bistoury	1.50
101*e*.	Gouley's Tenaculum	1.50
102.	Hewitt's Staff and Knife	4.00
103.	Syme's Staff	2.00
104.	Buck's Staff	3.00

Instruments for Tapping the Bladder.

FIG.	PART III.	PRICE
105.	Rectum Trocar	$2.50
	Rectum Trocar, ivory and silver	4.00
106.	Buck's Rectum Trocar	3.50
107.	Van Buren's Double Tube	3.00
108.	Dieulafoy's Aspirator	40.00
	Dieulafoy's Aspirator	50.00
	The same, cannon shape	60.00

Instruments for Stone in the Bladder.

SEARCHERS.

109.	Steel Sound, cylindrical	1.00
110.	Gouley's Searcher	2.00
111.	Little's Searcher	3.50
	Little's Searcher, plain	2.00
112.	Andrew's Searcher	2.50
113.	Otis' Exploring Sound	5.50
114.	Bilroth's Sounding Board	1.50
	Steel Sound	1.00 to 1.50
115.	Thompson's Searcher	4.00

FOR LITHOTRITY.

116.	Handle of Teevan's Lithotrite	
117.	Handle of Thompson's Lithotrite.	
118.	Female Blade of Thompson's Lithotrite	
119.	Male Blade of Thompson's Lithotrite	
120.	Jaws of Lithotrite	
121.	Jaws of Lithotrite	
122.	Heurteloup's Lithotrite	25.00
123.	Ferguson's Lithotrite	25.00
124.	Hunter's Trilabe	15.00, 20.00 30.00
125.	Jacobson's Lithotrite	30.00
126.	Reliquet's Lithotrite	9.00, 12.00, 15.00
127.	Thompson's Lithotrite	35.00
128.	Teevan's Lithotrite	30.00
129.	Civiale's Lithotriptor	25.00

FOR LITHOLAPAXY.

129*b*.	Bigelow's Lithotrite	40.00
129*c*.	Bigelow's Evacuator	12.00
129*d*.	Bigelow's Evacuator and Stand	16.00

FOR LITHOTOMY.

FIG.	PART III.	PRICE
130.	Pritchard's Anklets and Wristlets	6.00 to 8.00
131.	Little's Staff	2.00
132.	Markoe's Staff	2.00
133.	Wood's Staff	2.00
	Wood's Bisector	4.50
134.	Steel Staff	2.00
135.	Little's Director	1.50
136.	Lithotomy Forceps, straight	3.00
137.	Teevan's Forceps	3.00
138.	Maisonneuve's Crusher	20.00
139.	Blunt Gorget	$2.50
140.	Curved Lithotomy Forceps	3.00
141.	Dolbeau's Lithoclast	7.00
142.	Dolbeau's Guide	3.50
143.	Scoop and Conductor	2.50
144.	Sharp-pointed Scalpel	1.75
145.	Probe-pointed Scalpel	1.75
146.	Depuytren's Scalpel	1.75
147.	Blizard's Knife (American)	1.75
148.	Blizard's Knife (English)	2.00
149.	Dowell's Gorget and Staff	5.50
149*b*.	Little's Bistoury	2.00
149*c*.	N. R. Smith's Lithotome	12.00
149*d*.	Rectangular Staff	2.50
149*e*.	Luer's Scoop	2.50
149*f*.	Bush's Gorget	4.50
149*g*.	Lithotomy Forceps	3.00
150.	Brigg's Lithotome	7.00
150*b*.	Physick's Gorget	6.50
150*c*.	Hutchison's Lithotome	7.50
151.	Depuytren's Bistoury Caché	24.00

FOR SUPRA-PUBIC LITHOTOMY.

152.	Hooked Gorget	3.00
153.	Sonde à Dart	3.50
154.	Keith's Tenaculum	1.25
155.	Aponeurotome	2.00
156.	Gross' Artery Compressor	3.50
156.	Little's Lithotrity Forceps	2.50 to 3.00

FOR PERINEAL LITHOTRITY.

157.	Dolbeau's Dilator	24.00
157*b*.	Duplay's Dilator	45.00
157*c*.	Gouley's Hydro-Hæmostat	2.50
158.	Gouley's Lithoclast	10.00
158*b*.	Gouley's Lithoclast, plain	6.00

FOR CLEARING THE BLADDER OF DEBRIS.

159.	Nelaton's Evacuating Apparatus	30.00
160.	Thompson's Measure	12.00
161.	Van Buren's Debris Syringe	3.50
162.	Canula à Chemise	1.50
163.	Glover's Evacuating Apparatus	14.00
164.	Debris Tube	2.50
165.	Mason's Catheter Staff	5.00
166.	Van Buren's Evacuating Catheter and Bag	7.00
167.	Double Current Catheter, silver	5.00
168.	Nott's Double Current Catheter	4.00
169.	Thompson's Urethral Forceps	2.00
170.	Alligator Urethral Forceps	6.00
171.	Alligator Urethral Forceps	5.50
172.	Leroy d'Etiolle's Scoop	12.00 to 15.00
173.	Reliquet's Stone Crusher	12.00 to 15.00

Scrotal Instruments.

FIG.	PART III.	PRICE
174.	Henry's Depilating Forceps	2.50
175.	Lewis' Varicocele Clamps	4.00
176.	Henry's Scrotal Clamps	8.00
177.	Set 4 Trocars	6.00
178.	Rubber Bag, Hydrocele	3.50
179.	Miliano's Suspensory	2.00

Trocars.

FIG.	PART III.	PRICE
179*b*.	Wood's Trocar	5.00
	Harris' Trocar	5.00
179*c*.	Trocar and Canula (See Figs. 181*b*, *c*.)	1.50
180.	Urinals for Incontinence. (See Figs. 47, 48, 49, 50, page 20, Part IV.)	

Fumigation Apparatus.

FIG.	PART III.	PRICE
181.	Lee's Lamp	3.50
	Bumstead's Lamp	3.00
181*b*.	(Little's Trocar)	2.00
181*c*.	(Folker's Trocar)	2.50
182.	Van Buren's Lamp	1.50 to 2.50
183.	Maury's Apparatus	12.00

For Injecting the Bladder.

FIG.	PART III.	PRICE
184.	Keye's Bladder Washer	5.00

Gynæcological Instruments.

FIG.	PART III.	PRICE
185.	Gynæcological Bag	
186.	Obstetrical Bag	

Specula Vaginæ.

FIG.	PART III.	PRICE
187.	Weber's	7.00
187*b*.	Fryer's	
187*c*.	Grave's	6.00
187*d*.	Jenk's	8.00
187*e*.	Hornby's	9.00
188.	Ferguson's, Tubular, glass	.50
	Ferguson's, English	1.50
	Ferguson's, hard rubber	1.00
189.	Blakeley's, Resilient	3.00
190.	Meadow's, Trivalve	10.00
191.	Meadow's, Quadrivalve	12.00
192.	(Buttle's Case)	23.00
193.	Nelson's	6.00
194.	Thomas' Cusco's	5.00
195.	Emmett's	20.00
196.	Segala's	8.00
197.	Woodward's	6.00
198.	(Gardner's Case)	46.00
199.	Nott's, with chain	8.00
200.	Thomas', Tubular	3.00
201.	Thomas', Telescopic	5.00
202.	Bozeman's	12.00
203.	Nott's, plain	5.00
204.	French's	1.50
204*b*.	(Emmett's Tenacula)	1.25
205.	Storer's	5.00
206.	Hunter's	6.00
207.	Storer's Sims'	5.00
208.	Brewer's	6.00
209.	Brewer's Sims'	6.00
209*b*.	(Skene's Reflux Catheter)	2.50
210.	T. & Co.'s, Quadrivalve	10.00
211.	Dickens'	9.00
212.	Thomas' Latest	20.00
213.	Steel Bivalve	6.50
214.	Byrne's	11.00
215.	Wackerhagen's	12.00
216.	Thomas'	10.00
217.	Thomas' Sims'	10.00
218.	Ferguson's Mirror	.50
219.	Stohlmann's	8.00
220.	Dawson's Sims'	7.00
221.	Bozeman's Duck Bill	3.50
222.	Ashton's Fenestrated	1.00
223.	Dome Top	.75
224.	Greensville Dowell's	1.50
225.	T. & Co.'s Trivalve, steel	12.00
226.	Weiss'	16.00
227.	Sims' Duck Bill	2.50
228.	Bath	3.00
229.	Baxter's	5.50
230.	Sims' Bivalve	5.50
231.	Howard's	7.00
231*b*.	(Turner's Applicator)	1.50
231*c*.	(Skene's Instillation Tube)	.50
232.	Schlotterbeck's Speculum	10.00
233.	Ball's	11.00
234.	Barnes' Neugebauer's	2.50
235.	Labia, wire	2.00
236.	Sims' Vaginal Dilator, glass	.50
237.	Bivalve Speculum	6.00

For Vesico-Vaginal Fistula.

FIG.	PART III.	PRICE
238.	Dawson's Sims' Speculum	5.00
239.	Sims' Wire Adjuster	1.50
240.	Sims' Pulley	1.25
241.	Sims' Blunt Hook	1.25
242.	Sims' Speculum	2.50
242*b*.	Skene's Probe and Knife	.75
243.	Sponge Holder, German silver	1.00
244.	Sponge Holder, iron	.75
245.	Bozeman's Button Adjuster	2.25
246.	Bozeman's Depressor	2.75
247.	Sims' Sigmoid Catheter, metal	.75
	The same, hard rubber	1.00
	The same, plated	1.50
	The same, silver	2.00

FIG.	PART III.	PRICE
248.	Sims' Depressor	1.50
249.	Bozeman's Wire Adjuster	2.00
250.	Bozeman's Tenaculum	1.50
251.	Bozeman's Blunt Hook	1.50
252.	Bozeman's Angular Scalpel	1.75
253.	Bozeman's Straight Scalpel	1.75
254.	Not 's Depressor	1.50
255.	Sims' Scalpel	1.50
256.	Sims' Tenaculum	1.25
257.	Sims' Seizing Forceps	4.00
258.	Nott's Twisting Forceps	4.00
259.	Sponge or Seizing Forceps	3.00

Vesico-Vaginal Fistula and Uterine Scissors.

FIG.	PART III.	PRICE
260.	Bozeman's Angular	4.50
261.	Bozeman's Curved	4.50
262.	Sims' Curved	3.50 to 4.50
263.	Emmett's Curved	4.50
264.	Sims' Straight	3.50
265.	Emmett's Double Curved	4.50
266.	Haywood Smith's	12.00
267.	Bozeman's Double Curved	4.50
267*b*.	(Jenk's Uterine Probe)	1.75

Bozeman's Buttons and Needles.

FIG.	PART III.	PRICE
268.	Bozeman's Button, silver	1.00
269.	Bozeman's Button, metal	.50
270.	Twisting Forceps	4.00
	Scissors, for cutting wire	2.50 to 4.50
271.	Bozeman's Buttons	
272.	Bozeman's Needle Carrier	8.00
273.	Bozeman's Button Shaper	3.50
274.	Sims' Needle Forceps	2.50
	Bozeman's Needle	.25
	Sims' Needle	.12
	Emmett's Needle	.12

Uterine Probes, Sounds, and Dressing Instruments.

FIG.	PART III.	PRICE
275.	Thomas' Hard Rubber Probe	1.25
276.	Silver Uterine Probe	1.25
277.	Sponge Tent Expeller	.75
278.	Emmett's Applicator	1.75
279.	Thomas' Elastic Probe	1.25
280.	Silver Uterine Probe	1.25
	Alluminium Probe	1.25
281.	Leaden Probe.	.40
282.	Chapman's Probe and Sound	4.00
283.	Nott's Set of Uterine Instruments :	
1.	Needle Holder	4.50
2.	Applicator and Expeller	1.00
3.	Sponge Holder	1.25
4.	Leaden Sound	.40
5.	Scarifying Knife	1.00
6.	Simpson's Sound	1.00
7.	Uterine Probe, silver	1.00
284.	Whalebone Probe	.50
285.	Bozeman's Dressing Forceps	3.00
286.	Sims' Caustic Forceps	4.00
287.	Uterine Dressing Forceps	2.00
288.	Curved Uterine Knife	1.50
289.	Newman's Metrorganon	3.00
290.	Whalebone Probang	.25
291.	Uterine Knife	1.50
292.	Probe Uterine Knife	1.50
293.	Gardner's Caustic Holder	2.50
294.	Sims' Curette, blunt	1.50
	Sims' Curette, sharp	1.75
295.	Siemon's Curette	2.50
296.	Buttle's Scarifyer and Tenaculum,	2.50
297.	Edward's Caustic Holder	3.00
298.	Gardner's Caustic Forceps	3.00
299.	Siemon's Curette	2.50

Uterine Sounds and Elevators.

FIG.	PART III.	PRICE
300.	Sims' Uterine Elevator, No. 1	6.00
301.	Gardner's Manifold Instrument	12.00
302.	Emmett's Uterine Elevator	4.50
303.	Simpson's Sound, graduated	1.50
	Simpson's Sound, plain	1.25
304.	Stowe's Elevator	4.50
305.	Guernsey's Uterine Elevator	1.50
306.	Skene's Uterine Sound	6.00
307.	Noeggerath's Uterine Elevator	9.00
308.	Sponge Tent Expeller	.75
309.	Lente's Platina Cup	3.50
310.	Lente's Caustic Probe	1.75
311.	Sliding Uterine Sound	3.00
312.	Hunter's Uterine Sound	1.25
313.	Gidding's Uterine Sound	2.00
314.	Folding Uterine Sound	2.50
315.	Elliott's Uterine Sound	7.00
316.	Sims' Redressor, No. 2	6.00

Uterine Dilators.

FIG.	PART III.	PRICE
317.	Sims' Uterine Dilator	12.00
317*b*.	Wackerhagen's Applicator	.08
318.	Barnes' Dilators	6.00
319.	Sponge Tents, per doz.	1.50
	Seatangle Tents, per doz.	2.00
	Tupelo Tents, per doz.	2.00
320.	Simpson's Dilators	9.00
321.	Hank s Uterine Dilators	1.00
322.	Chamber's Stem-Pessary	3.00
322*b*.	Peaslee's Uterine Dilators	6.50
323.	Climax Uterine Dilator	15.00
323*b*.	Emmett's Uterine Dilator	2.00
324.	Thomas' Dilating Forceps	2.50
325.	Ball's Uterine Dilator	10.00

FIG.	PART III.	PRICE
327.	Wylie's Cervical Speculum and Wylie's Probe	3.50
327*b*.	Atlee's Uterine Dilator	2.75
328.	T. & Co.'s Uterine Speculum	7.00
329.	Jenk's Uterine Sound	3.50
330.	Ellinger's Uterine Dilator	10.00
331.	Miller's Uterine Dilator	10.00
332.	Palmer's Uterine Dilator	5.00
332*b*.	Hunter's Uterine Dilator	14.00
333.	Nott's Uterine Dilator	3.50
334.	White's Uterine Dilator	4.50
335.	Thomas' Uterine Dilator	5.00
336.	Simpson's Uterine Dilator	4.50
337.	Vanderveer's Uterine Dilator	5.50

For Division of the Os Uteri and for Scarifying.

FIG.	PART III.	PRICE
338.	Chapman's Uterine Scarificator	2.50
339.	Buttle's Uterine Scarificator	1.25
340.	White's Hysterotome	12.00
341.	Stohlmann's Hysterotome	7.00
342.	Sims' Rotating Knife	4.50
343.	Storer's Uterine Scarificator	6.00
344.	Simpson's Hysterotome	7.00
345.	Emmett's Uterine Knife	5.00
346.	Skene's Sound and Scarificator	6.00
347.	Laenneck's Uterine Knives, each	2.50
348.	Chapman's Scarificator	1.50
349.	Amputating Scissors	7.00
350.	Clark's Toothed Scissors	6.00
351.	Thomas' Punching Forceps	6.00
352.	Peaslee's Uterotome	4.50
	Peaslee's Uterotome, 2 blades	6.50
353.	Küchenmeister's Scissors	6.00
354.	Sims' Knives and Holder	10.00
355.	Thomas' Dry Cupper	1.50

For Injection of the Vagina and Uterine Cavity.

FIG.	PART III.	PRICE
356.	Lente's Ointment Syringe	3.50
357.	Barker's Ointment Bougie	1.50
358.	Long Pipe Uterine Syringe	1.25
359.	Nott's Double Catheter, long	4.00
	Nott's Double Catheter, short	3.00
360.	Hutchinson's Ointment Syringe, in case	11.00
361.	Davidson's Syringe, No. 1	2.00
	Davidson's Syringe, No. 2	1.50
362.	Syphon Syringe	3.00
363.	Byrne's Reflux Catheter	2.50
	Byrne's Adjuster	2.00
364.	Reliquet's Double Catheter	2.00
365.	Lallemand's Port Caustic	4.50
366.	Parker's Caustic Syringe	3.50
367.	Bodenhamer's Irrigator	3.00
368.	Lente's Ointment Syringe	6.50
	Lente's Ointment Syringe, in case	8.00
369.	Braun's Uterine Syringe	2.50
370.	Lawson's Applicator	4.00
371.	Nott's Uterine Syringe	2.50
372.	Nott's Applicator	5.00
373.	Dick's Caustic Syringe	3.50
374.	Maw's Enema Pump	3.50
375.	Woodward's Syphon Douche	2.50
376.	Clay's Insufflator	2.00
377.	T. & Co.'s Universal Syringe	10.00
	Rubber Bag Syringe	2.00 to 3.50
	French Irrigateurs	6.00 to 10.00

For Displacements of the Uterus.

FIG.	PART III.	PRICE
378.	White's Uterine Repositor	5.00
	(See also Figs. 300 to 316.)	

Pessaries.

FIG.	PART III.	PRICE
379.	Hornby's	6.00
380.	T. & Co.'s Supporter	6.00
381.	Babcock's Pessary	15.00
382.	Davie's	8.00
383.	Cutter's, with Belt	2.50
384.	Rozer's	8.00
385.	Thomas' Anteversion	1.25
386.	Thomas' Retroversion	1.00
387.	Smith's	.50
388.	Thomas' Anteversion	1.25
389.	Thomas' Cutter's	1.50
	Thomas' Cutter's, with Belt	2.50
390.	Thomas' Cutter's, with Belt	2.50
391.	Smith's	.50
392.	Chamberlain's	1.25
393.	Buttle's	.75
394.	Noeggerath's	2.00
395.	Emmett's Metal Ring	.40
396.	Grayly Hewit's	1.25
397.	Sleigh	.75
398.	Frazer's	4.00
399.	Hoffman's	1.50
400.	Zwank's	2.50
401.	Buttle's	.75
402.	Hank's	1.50
403.	Buttle's	.75
404.	Globe, silver	8.00 to 10.00
	Globe, hard rubber	1.00
405.	Kinloch's Retroflexion	1.25
406.	Kinloch's, for Prolapsus of Bladder	2.50
407.	Kinloch's Anteversion	1.25
408.	Ball's Stem	1.25
409.	Kinloch's Retroflexion	2.00
410.	Thomas' Retroflexion	1.00
411.	Thomas' Stem, for Anteflexion	2.50
412.	Thomas' Anteflexion	2.00
413.	Thomas' Anteversion	1.25
414.	Thomas' Anteversion	1.25

FIG.	PART III.	PRICE
415.	Thomas' Anteflexion	2.00
416.	Hitchcock's Anteversion	1.00
417.	Perry's Flexion Instrument	5.00
418.	Hewitt's Pessary	.50
419.	Hodge's Closed Lever	.50
420.	Braun's Colpeurynter	3.00
420*b*.	Trask's Dumb Bell Pessary	1.25
420*c*.	Trask's Dumb Bell Pessary	.75
421.	Coxeter's Stem	1.25
422.	Conant's Stem	3.00
423.	Hurd's, soft rubber	1.50
	Hurd's, hard rubber	2.00
424.	Thomas' Galvanic Stem	1.50
425.	Stem Pessary	.75
426.	Sponge Tents, per doz	1.50
427.	Edward's Pessary	3.00
428.	Stem	.75
428*b*.	Weber's	4.50
428*c*.	Cutter's Ring	2.50
429.	Hewitt's	1.25
429*b*.	Hodge's Horse-shoe	.50
430.	Peaslee's Stem	1.50
431.	O'Leary's	5.00
431*b*.	Thomas' Anteversion	1.25
431*c*.	Fowler's	2.00
431*d*.	Skene's Urinal Cup	2.50
432.	Sims' Pessary Introducer	8.00

For Uterine and Ovarian Tumors.

ECRASEURS AND LIGATORS.

433.	Van Buren's Ligator	7.00
434.	Emmett's Ecraseur	35.00
435.	Chassaignac's Ecraseur	25.00
436.	Edward's Ecraseur	18.00
437.	Smith's Wire Ecraseur, curved	6.00
438.	Braxton Hick's Ecraseur	15.00
438*b*.	Braxton Hick's Ecraseur, improved	15.00
438*c*.	Smith's Wire Ecraseur, straight	5.50
438*d*.	Barnes' Wire Ecraseur	5.50
438*e*.	T. & Co.'s Long Chain Ecraseur	20.00
438*f*.	Cintrat's Ligator	2.50
438*g*.	Thompson's Ecraseur	25.00
	Sims' Port Chain Ecraseur (Fig. 470)	35.00

CLAMPS.

439.	Gueride's Clamp	5.00
440.	Noeggerath's Clamp	7.00
441.	Dawson's Clamp	8.00
442.	Nott's Rectilinear Ecraseur	12.00
443.	Thomas' Clamp	4.50
444.	Spencer Well's Clamp	6.00
444*b*.	Spencer Well's (Torsion Forceps)	8.00
445.	Spencer Well's Pedicle Clamp	25.00
445*b*.	Byford's Clamp	15.00
446.	Darby's Clamp	7.00

FIG.	PART III.	PRICE
447.	Atlee's Clamp	6.00
447*b*.	Spencer Well's Clamp Forceps	8.00
447*c*.	Thomas' Sac Forceps	3.00
447*d*.	Thomas Tissue Forceps	4.50
448.	Storer's Clamp Shield	12.00
449.	Spencer Well's Sac Forceps	4.50
450.	Baker Brown's Clamp	12.00
451.	Nelaton's Tumor Forceps	3.50
452.	Nelaton's Pedicle Forceps	3.50

TUMOR FORCEPS.

453.	Greenhalg's Tumor Forceps	8.00
454.	Byrne's Tenaculum Forceps	6.00
455.	Byrne's	
456.	Campbell's Tumor Forceps	8.00
457.	Byrne's Vulsellum	3.00
458.	Byrne's Vulsellum	3.00
459.	Luer's Polypus Forceps	6.00
460.	Nott's Tenaculum	.25
461.	Double Tenaculum	3.50
462.	Double Tenaculum	2.50
463.	Byrne's Uterine Fixator	2.50
464.	Sims' Vulsellum Hook	5.50
465.	McClintock's Polypus Forceps	6.00
466.	Sims' Enucleator Blunt Hook	3.50
467.	Sims' Enucleator	3.50
468.	Sims' Tampon Screw	1.25
469.	Aveling's Polyptome	8.00
470.	Sims' Port Chain Ecraseur	35.00

For Cautery.

471.	Actual Cautery Irons, each	1.50
472.	Blowpipe	4.00
473.	Byrne's Battery	
474.	Cautery Sling	18.00
475.	Cautery Irons, set	5.50
476.	Cautery Irons, set	4.50
	(Paquelin's Thermo-Cautery, page 134, Part I.)	
	(Dawson's Battery, page 112, Part I.)	

For Paracentesis and Drainage.

(Aspirators, page 131, Part I.)

477.	Chassaignac's Drainage Trocar	4.00
477*b*.	Rubber Drainage Tube, large, per yard	.40
	The same, medium, per yard	.40
	The same, small, per yard	.40
477*c*.	Ellis' Drainage Spiral, silver	.75
477*d*.	Callender's Drainage Canula	3.00
	(See page 101, Part III.)	

Paracentesis Abdominis Trocars.

478.	Emmett's Trocar	4.50
479.	Fitch's Dome Trocar (1, 2, 3), and Tubing	14.00

FIG.	PART III.	PRICE
	Fitch's Aspirator Needles (4, 5)	2.50
	Fitch's Clamp Forceps (6)	4.50
480.	Spencer Well's Trocar	10.00
	Spencer Well's Trocar, curved	11.00
481.	Thomas' Trocar	20.00
482.	Flint's Trocar	3.50
	Flint's Trocar and Bulb	5.00
483.	Thomas' Clamp, for vaginal wounds	8.00

Obstetrical Forceps.

484.	Hodge's	7.00, 8.00
485.	White's	8.00
486.	Miller's, jointed	15.00
487.	Buzzle's	10.00
488.	Denman's	7.00
489.	Loewenthal's	20.00
490.	Elliott's	9.50
491.	Simpson's, long	8.00
	Simpson's, short	7.00
492.	Budd's	8.00
493.	Robertson's	8.00
494.	Vectis	3.50
495.	Davis'	7.50
496.	Bedford's	8.00
496*b*.	(Scholler's Cord Carrier)	4.00
497.	Tarnier's	24.00
498.	McLean's	8.00
499.	Nægeli's	8.00
500.	Roller's	8.00
501.	Blake's	8.00
502.	Ives'	7.50
502*b*.	Draper's	8.00
503.	Hunter's	9.00
504.	Thomas'	7.00
505.	Tarsitani's	12.00
506.	Brickel's, large	8.00
	Brickel's, small	7.00
507.	Comstock's	8.00
508.	Osborn's	8.00
509.	Taylor's	12.00
510.	Robinson's	8.00
510*b*.	Hale's	7.00
510*c*.	Jenk's	8.50
510*d*.	Trueheart's	12.00
510*e*.	Vedder's	13.00
510*f*.	Bethel	8.00
510*g*.	Rockwell's	8.50
510*h*.	Mathew's	8.00
	Mathew's, with screw	9.50
510*i*.	Newman's	7.00
510*k*.	Sawyer's	7.00
510*l*.	Gillette's	9.50
510*m*.	McFerran's Forceps	12.00
510*n*.	Reyerson's Vectis	5.00
510*o*.	Robinson's Insufflator	2.00

FIG.	PART III.	PRICE

Placenta and Embryotomy Instruments.

511.	Dewee's Hook and Lever	1.00
512.	Embryotomy Forceps	3.00
513.	Placenta Forceps	2.50
514.	Bachelder's Embryotomy Forceps,	12.00
515.	Pulling's Funis Clamp	.40

For Obstructed Labor.

516.	Holme's Perforator	5.00
517.	Bedford's Perforator	3.00
518.	Simpson's Perforator	3.00
519.	Smellie's Perforator	2.50
520.	Nægeli's Perforator	4.00
521.	Bachelder's Perforator	5.00
522.	Blott's Perforator	6.00
523.	Thomas' Perforator (See Fig. 533, &c.)	8.00
524.	Taylor's Blunt Hook	2.50
525.	Bedford's Guarded Hooks	6.00
526.	Blunt Hook and Crotchet	1.50
527.	Decapitating Hook	2.50
528.	Guarded Hook and Crotchet	4.50
	Brickell's Blunt Hook	5.00
	Brickell's Crotchet	5.00
529.	Meig's Craniotomy Forceps	3.50
530.	Thomas' Craniotomy Forceps	6.00
531.	Lusk's Cephalotrite	18.00
532.	Simpson's Cranioclast	10.00
533.	Van Huvel's Forcep Saw	35.00
533*b*.	White's Perforator	4.50
533*c*.	Braun's Perforator	15.00
533*d*.	Trueheart's Perforator	8.00
534.	Braun's Munde's Cephalotrite	20.00
534*b*.	Simpson's Cephalotrite	15.00
	Brickell's Craniotomy Forceps	4.00

For Lacerations of the Female Perineum.

535.	Ashton's Perineum Needle	1.00
536.	Helical Needle	1.75
537.	Agnew's Forceps	2.50
538.	Agnew's Needles and Holder	4.50
539.	Shot Compressor	2.50
540.	Skene's Needle	1.75
541.	Brickell's Suture Stay	.75
541*b*.	Munson's Suture Stay, per pair	.75
542.	Peaslee's Needles (3), straight	3.00
542*b*.	Peaslee's Needle, right	1.75
	Peaslee's Needle, left	1.75
543.	Parker's Perineum Needles	5.00
544.	Usual Perineum Needle	.75

Anal and Rectal Instruments.

545.	Bodenhamer's Reflector	20.00
546.	Ashton's Speculum	1.00
547.	Trellis' Speculum	16.00

FIG.	PART III.	PRICE
548.	Bodenhamer's Endoscope	7.50
549.	Gorget Anal Speculum	2.50
550.	English Rectal Bougie, cylindrical,	1.00
551.	English Rectal Bougie, conical	1.50
552.	Bodenhamer's Sounds, set of 10	10.00
553.	Syphon Syringe	2.50
554.	Small Bivalve Speculum	4.50
555.	Rectal Dilator	12.00
556.	Whitehead's Dilator	3.00
557.	Bodenhamer's Irrigator	3.00
558.	Suppository, hard rubber	1.50
559.	Bivalve Speculum Ani	6.50
560.	3 Cautery Irons and Handle	4.50
561.	Munde's Rectal Irrigator	2.50
562.	2 Cautery Irons, each	1.50
563.	Anal Dilator	10.00
564.	Thebaud's Anal Dilator	12.00
565.	Artery Forceps	3.00
566.	Rectal Insufflator	2.50
567.	Smith's Pile Clamp	6.00
568.	Ashton's Pile Clamp	3.00
569.	Byrne's Double Tenaculum	6.00
570.	Rectal Dressing Forceps	2.00
571.	Rectal Sponge Holder	1.00
572.	Rectal Curette	2.00
573.	Silver Probe	1.25
574.	Silver Probe	1.25
575.	Stomach and Enema Pump	16.00
576.	Hutchinson's Syringe	11.00
577.	Rectal Port Caustic	3.00
578.	Maw's Enema Pump	3.50
579.	Amusat's Cautery Clamp	8.00
580.	Rectal Brush Holder	2.50
581.	Vertebrated Colonic Sound	8.00
582.	Elastic Probe	.50
583.	Curved Bistoury	1.75
584.	Rectal Bistoury Caché	7.00
585.	Blandin's Knife	8.00
586.	Cooper's Knife	1.25, 1.50
586*b*.	Probe Bistoury	1.25, 1.50
586*c*.	Sharp Bistoury	1.25, 1.50
586*d*.	Blunt Fissure Knife	1.25, 1.50
586*e*.	Sharp Fissure Knife	1.25, 1.50
587.	Bodenhamer's Fissure Knife	5.00
588.	Bistoury Caché, Fistula	7.00
589.	Allingham's Scissors and Director,	7.00
590.	Rectal Scarificator	1.50
591.	Bodenhamer's Bistoury, for fistula in ano	10.00
592.	Gooche's Canula	5.00
593.	Camel's-hair Brush	.10
	Glass Brush	.30

FIG.	PART III.	PRICE
594.	Carroll's Knot Tyer	2.00
595.	Silver Director	1.50
596.	Bodenhamer's Curvilinear Forceps	5.00
597.	Van Buren's Ligator	7.00
598.	Lent's Platina Cup	3.50
599.	Plastic Pin, glass head	.25
600.	Lent's Ligature Carrier	1.25
601.	Bodenhamer's Spring Forceps	4.50
602.	Sims' Needle Forceps	2.50
603.	Hutchinson's Needle	2.50
604.	Skene's Needle	1.75
605.	Helical Needle	1.75
606.	Port Mesche	.75
607.	Needles, straight and curved	.05, .15
608.	Exploring Trocar	1.50
609.	Angular Pile Needle	1.00
610.	Bush's Pile Needles	3.00
611.	Perineum Needle	1.00
612.	Pile Supporter	8.00
613.	Angular Scissors	1.50
614.	Gibson's Port Ligature	3.00
615.	Trousseaux's Pile Supporter	2.75
616.	Bush's Pile Scissors	1.50
617.	Pile Bougie	1.25
618.	Bolton's Pile Bougie	1.25
619.	Reed's Pile Bougie	1.25
619*b*.	Depuytren's Enterotome	5.00
620.	Verona's Winch	3.00 to 3.50
621.	Sims' Anal Dilator	4.50
622.	Adam's Pile Syringe	4.50
623.	William's Rectal Speculum	4.50
624.	Wale's Rectal Bougie	1.50 to 4.00
625.	Allingham's Ligature Carrier	3.50
	Elastic Ligature, per yard	.25

Hernia Instruments.

FIG.	PART III.	PRICE
626.	Agnew's Instrument	6.00
627.	Wutzer's Instrument	12.00
628.	Hinge Director	1.50
629.	Levis' Director	1.50
630.	Heaton's Syringe	4.00
631.	Redfern Davis' Instrument	15.00
632.	Dowell's Needle, straight	1.00
	Dowell's Needle, curved	1.00
633.	Cooper's Knife, sliding	2.00
634.	Stewart's Knife	5.00
	Allis Herniatome (Supplement, page	7.00
	Stanley's Director (Part I., page 44)	2.50
	Peter's Director (Part I., page 48).	2.50
	Hernia Knife, plain (Part I., page 46)	1.00

Part IV.

Orthopædic Apparatus.

Shoulder Braces.

FIG.		PRICE
1.	Elastic Brace	$2.00
	Elastic Brace	2.50
	Elastic Brace	3.00
2.	Elastic Brace	2.00
	Elastic Brace	2.50
	Elastic Brace	3.00
3.	Steel Back Brace	4.00
	Steel Back Brace	5.00

Spine Braces.

4.	T. & Co.'s Brace for Pott's Curvature	30.00
5.	The same, large	35.00
7.	Lateral Curvature, small	30.00
8.	T. & Co.'s Lateral Curvature Brace,	35.00
	T. & Co.'s Lateral Curvature Brace, large	40.00
9.	Washburn's Spine Brace	15.00
10.	Washburn's Spine Brace, large	20.00
11.	Markoe's Torticollis Brace, small	35.00
12.	Markoe's Torticollis Brace, large	40.00
13.	Torticollis Brace	5.00
14.	Davis' Apparatus for Caries of Spine	20.00
15.	Davis' Apparatus for Caries of Spine	24.00
16.	Taylor's Apparatus for Caries of Spine, small	24.00
	Taylor's Spine, large	30.00
	Sayre's Plaster Paris Jacket	
	Andrew's Spine Brace (Fig. 192)	

Umbilical Bandages.

17.	Umbilical	5.00
	Umbilical	6.00
	Umbilical	8.00
18.	Chase's Umbilical Truss	4.00
19.	Bow Umbilical Truss	5.00
20.	Bow Umbilical Truss	2.50
	Bow Umbilical Truss, large	3.00
21.	Children's Truss	2.50
	Children's Truss	3.00
	Children's Bandage	2.00
	Children's Bandage	3.00

Trusses.

FIG.	PART IV.	PRICE
22.	Bow Truss	3.50
23.	Ratchet Truss	4.50
24.	Best French, single	4.00
	Best French, single	5.00
25.	Best French, double	6.00
26.	Chase's	4.00
27.	French Adjustable	4.50
28.	German, single	$3.00
	German, double	4.50
29.	Best Common, double	4.00
30.	Hull's	2.00
31.	Self-Adjusting, single	3.00
	Self-Adjusting, single	5.00
32.	Self-Adjusting, double	6.00
	Self-Adjusting, double	8.00
33.	French Adjustable, double	8.00
34.	T. & Co.'s Finger-Pad	5.00
35.	Folsom's	20.00
36.	Schuppert's Galvanic	15.00 to 25.00

Abdominal Supporters.

37.	Bow Spring	4.00
	Bow Spring	5.00
38.	Fitch's	5.00
	Fitch's	6.00
39.	Eugene	6.00
40.	London	4.00
41.	Bandage, Abdominal	6.00
42.	Noeggerath's	6.00
43.	Thomas'	8.00
	Thomas', Cedar Pad	2.50
	Boston	5.00

Abdominal Belts.

44.	Silk, Elastic	12.00
	Cotton, Elastic	8.00
	Riding Belt	5.00
	Canvas Belt	4.00
	Satin-jean Belt	6.00

Prolapsus Ani and Pile Supporters.

45.	Pile Supporter	8.00
	Mathieu's (Fig. 207)	5.00

Suspensory Bandages.

46.	Miliano's	2.00
	Cotton	.50
	Linen	.75
	Silk	1.25
	Silk, Elastic	2.50
	Rawson's U. S. A., No. 1	1.50
	Rawson's U. S. A., No. 1½	1.75
	Rawson's U. S. A., No. 2	2.00
	Rawson's U. S. A., No. 3	3.00
	Rawson's U. S. A., No. 4	4.00

Urinals for Incontinence.

47.	Extrophy	25.00
	Extrophy	50.00
48.	India Rubber	2.50

FIG.	PART IV.	PRICE
49.	India Rubber	$4.50
	India Rubber	6.00
50.	India Rubber	2.50

Apparatus for Deformity and Debility of the Upper Extremities.

51.	For Ununited Fracture of the Humerus	35.00 to 70.00
52.	Prince's Artificial Hand	60.00
53.	Elbow, Anchylosis Apparatus	18.00
54.	Paralysis Glove	20.00
55.	Shoulder, Dislocation	6.00
	Shoulder, Dislocation	8.00
56.	Cooper's Apparatus, Dislocated Clavicle	5.00

Apparatus for Deformity and Debility of the Lower Extremities.

FOR SHORT LEGS.

57.	Leg Extension	9.00
	(Shoe extra.)	
58.	Leg Extension and Ankle Brace	18.00
	(Shoes extra.)	
59.	Bigg's Short Leg Apparatus	35.00

FOR FLAT FEET.

59b.	Flat Feet Sole	2.50
	Flat Feet Sole, per pair	5.00

FOR WEAK ANKLES.

60.	Weak Ankle Brace, small, each	6.00
	Weak Ankle Brace, medium, each	8.00
	Weak Ankle Brace, large, each	10.00
	Weak Ankle Brace, small, per pair	12.00
	Weak Ankle Brace, med., per pair	16.00
	Weak Ankle Brace, large, per pair	20.00
	(Shoes extra.)	
61.	For TALIPES EQUINUS:	
62.	Tendo Achilles Brace, small, each	8.00
	Tendo Achilles Brace, medium, each	10.00
	Tendo Achilles Brace, large, each	12.00
	Tendo Achilles Brace, small, per pair	16.00
	Tendo Achilles Brace, med., per pair	20.00
	Tendo Achilles Brace, large, per pair	24.00
	(Shoes extra.)	

FOR TALIPES VARUS ET VALGUS.

63.	T. & Co.'s Clubfoot Shoe, small, each	10.00
	T. & Co.'s Clubfoot Shoe, med., each	12.00
	T. & Co.'s Clubfoot Shoe, large, each	14.00
	T. & Co.'s Clubfoot Shoe, per pair	20.00
	T. & Co.'s Clubfoot Shoe, per pair	24.00
	T. & Co.'s Clubfoot Shoe, per pair	28.00
	Barwell's Shoe (Fig. 143)	
64.	Sayre's Shoe, small, each	10.00

FIG.	PART IV.	PRICE
	Sayre's Shoe, medium, each	$12.00
	Sayre's Shoe, large, each	14.00
	The same, per pair	20.00, 24.00, 28.00
65.	Talipes Valgus	
66.	FOR TALIPES CALCANEUS:	
67.	Talipes Calcaneus Apparatus, each,	10.00
	Talipes Calcaneus Apparatus, each,	12.00
	The same, per pair	20.00, 24.00
68.	Talipes Calcaneus Apparatus, each,	10.00
	Talipes Calcaneus Apparatus, each,	12.00
	The same, per pair	20.00, 23.00
69.	SUPPORT FOR WEAK LEGS:	
	For Adults	35.00
	For Adults	50.00
	For Adults	75.00
	For Children	25.00
	For Children	35.00

PARALYSIS APPARATUS.

70.	For Leg and Thigh, small, each	25.00
	For Leg and Thigh, medium, each.	30.00
	The same, per pair	30.00, 60.00
	(Shoes extra.)	
71.	Hemiplegia Apparatus, small	30.00
	Hemiplegia Apparatus, medium	40.00
	(Shoes extra.)	
72.	Paraplegia Apparatus, small	35.00
	Paraplegia Apparatus, medium	50.00
	Paraplegia Apparatus, large	70.00
	(Shoes extra.)	

FOR BOW-LEGS.

73.	Bow-Leg Braces, small, per pair	25.00
	Bow-Leg Braces, medium, per pair,	30.00
	(Shoes extra.)	

FOR GENU-VALGUM OR KNOCK-KNEE.

74.	Knock-Knee Braces, small, per pair,	30.00
	Knock-Knee Braces, med., per pair,	35.00
	Knock-Knee Braces, large, per pair,	40.00
	Trueheart's-Knee Brace (Fig. 197)	

FOR CORRECTING ANTERIOR CURVATURE OF THE TIBIA.

75.	Tibia Curvature Brace, small, each,	12.00
	Tibia Curvature Brace, med., each	15.00
	Tibia Curvature Brace, large, each.	18.00
	Tibia Curvature Brace, per pair	24.00
	Tibia Curvature Brace, per pair	30.00
	Tibia Curvature Brace, per pair	36.00

BARWELL'S ATTACHMENTS AND ARTIFICIAL MUSCLES, FOR ADJUSTING CLUB-FEET.

76.	Barwell's Eyes, each	.10
	Barwell's Tin Plate, each	.20

FIG.	PART IV.	PRICE
	Barwell's Rubber, per foot	$0.12
	Moleskin Plaster, per yard	1.50

FOR EVERSION AND INVERSION OF FEET.

77.	Eversion of Feet	5.00
	Eversion of Feet	10.00
	Eversion of Feet, with Pelvic Band,	30.00

APPARATUS FOR BUNIONS AND HAMMER TOES.

78.	Bunions, each	8.00
	Bunions, per pair	16.00
79.	Overriding Toes, each	7.00
	Overriding Toes	10.00 to 15.00
	Overriding Toes, for both feet	14.00
	Overriding Toes, for both feet	30.00

APPARATUS FOR FALSE JOINTS.

80.	Leg and Thigh, small	25.00
	Leg and Thigh, small	30.00
	Leg and Thigh, for adults	40.00
	Leg and Thigh, for adults	75.00
	(See also Figs. 51, 170, 171, 172, 173.)	

Apparatus for the Treatment of Joint Diseases.

80*b*.	Hooper's Knee Extension Apparatus	35.00

HIP-JOINT SPLINTS.

81.	Davis'	15.00
82.	Sayre's, small	15.00
	Sayre's, medium	16.00
	Sayre's, large	18.00
	Moleskin Plaster, per yard	1.50
84.	Hamilton's, Gauze	15.00
85.	Bauer's	25.00
86.	Bauer's Breeches, small	15.00
	Bauer's Breeches, medium	18.00
	Bauer's Breeches, large	25.00
87.	Taylor's, small	25.00
	Taylor's, medium	30.00
	Taylor's	35.00
	Taylor's, large	40.00
88.	Washburn's	7.00
89.	Hutchison's, small	25.00
	Hutchison's, fine	30.00
	Hutchison's, large	35.00
	Hutchison's, fine, large	40.00
	Sayre's Long Splint (Fig. 175)	
	Andrew's Splint (Fig. 191)	

KNEE-JOINT SPLINTS.

90.	Long, for Anchylosis	35.00
	Long, for Anchylosis, large	40.00
	(Shoes extra.)	
91.	Short, for Anchylosis	25.00
	Short, for Anchylosis, large	30.00

FIG.	PART IV.	PRICE
92.	Anchylosis Apparatus	$18.00
	Anchylosis Apparatus, large	24.00
93.	Sayre's Knee-Splint	20.00
	(Mode of Applying, Fig. 93.)	
	Andrew's (Fig. 187)	

ANKLE-JOINT SPLINTS.

98.	Sayre's, Extension	22.00
	Andrew's (Fig. 186)	

Elastic Hose.

SILK.

Leg and Thigh, best, each	11.00
Knee, best, each	8.00
Calf or Three-quarter, each	4.50
Fine Knee, each	6.00
Three-quarter or Calf, each	3.50

COTTON.

Leg and Thigh, each	5.50
Knee, each	3.50
Three-quarter or Calf	2.00

Knee Caps.

Silk, best	3.50
Silk, fine	3.00
Cotton	1.75

Anklets.

Silk	3.00
Cotton	1.75
(Wristlets and Armlets to order.)	

Elastic Belts.

Silk	12.00
Silk, with Stays	14.00
Cotton	8.00

Fracture Apparatus.

FOR THE THIGH.

102.	Smith's Anterior Splint	2.00
103.	Byrd's Smith's Splint	5.00
104.	Skinner's Bed	25.00
105.	Hewit's Femur Apparatus	40.00
106.	Buck's Apparatus	10.00
106*b*.	Buck's Weights, &c.	5.50
107.	Femur Apparatus	10.00
	Femur Apparatus	25.00
108.	Lente's Hospital Splint	18.00
109.	Burge's Apparatus	50.00
110.	Liston's McIntyre's Splint	16.00
111.	Henry's Shears, for Plaster Bandage	7.50

FOR THE PATELLA.

112.	Turner's Apparatus	12.00
113.	Lewis' Apparatus	6.00
114.	Boisnot's Apparatus	12.00
115.	Hartshorn's Apparatus	7.00

FIG.	PART IV.	PRICE
116.	Hamilton's Apparatus	$8.00
	Hamilton's Apparatus	10.00
117.	T. & Co.'s Knee-Cap	5.50
118.	Spring and Cup	6.00

FOR THE TIBIA AND FIBULA.

119.	Hodgen's Apparatus	6.00
120.	Smith's Anterior Splint	2.00
121.	Raphael's Pott's Splint	5.00

FOR THE LOWER MAXILLARY.

122.	Hamilton's Bandage	5.00
	Hamilton's Bandage, extra fine	12.00

FOR THE CLAVICLE.

	Fox's Apparatus (Fig. 147)	
123.	Levis' Apparatus	5.00
124.	Richardson's Apparatus	6.00
125.	Sayre's Dressing	
126.	Sayre's Dressing	
127.	Sayre's Dressing	
	Mayor's Apparatus (Fig. 150)	

FOR COLLE'S FRACTURE.

128.	Hewit's Splint	7.00
129.	Shrady's Splint	2.00

SUSPENDING APPARATUS.

130.	Hodgen's	5.00
	Clark's (Fig. 157)	
	Sayre's (Fig. 193)	
	Buck's (Fig. 174)	
	Smith's (Fig. 120)	
	Salt's (Fig. 156)	

CARVED WOOD SPLINTS.

Double Inclined Planes	7.00, 8.00, 9.00
Lining Splints, set of 20	5.00
Leg and Ankle Splints, per pair	2.00
Forearm Splints	1.25
Elbow Splints, plain	1.50
Elbow Splints, jointed	2.50
Patella Splints	1.50
Radius Splints	1.25
Bond's Splint, for fracture of radius	2.25
Clavicle Splint	4.00
Condyle and Humerus Splint	1.00
Large Extension Splint, Bar and Garter	7.00
Short Extension Splint, without screw	3.00
Interosseous Splint	.75
Joint Arm Splint	3.00
Dressing Splints, per pair	1.25

BASSWOOD SPLINTS.

Set of 12 Radius Splints	1.00
Set of 12 Radius Splints	1.25

FIG.	PART IV.	PRICE

HATTERS' BOARD, FOR SPLINTING.

Per yard	$4.00

GUTTA PERCHA, FOR SPLINTING.

Thick, per pound	3.00
Thin, per pound	4.00
(Plaster Paris Splinting.)	
(Wire Splints made to order.)	
Roller Bandage, per pound	1.50
Styptic Cotton, per box	.35
Adhesive Plaster, per yard	.75
Moleskin Plaster, per yard	1.50

Dislocation Apparatus.

131.	Pulleys, per pair	7.00
134.	Levis' Splint	1.50
136.	Luer's Luxation Forceps	8.00
137.	Charrière's Forceps	9.00

Counter-Extension.

138.	Stanchion	5.00
	Stanchion	10.00

Crutches.

141.	Whittemore's, lancewood, per pair	12.00
	Whittemore's, maple, per pair	11.00
	Plain Maple, per pair	7.00
	Plain Hickory, per pair	4.00
	Hickory, rubber bottom, per pair	5.00
	Children's, per pair	3.00
	Children's, per pair	5.00
	Sockets, for Crutches, per pair	4.00
	Crutch Rubber	.45

LITTERS.

142.	Folding	
	(Other styles.)	

Miscellaneous Apparatus.

FOR CLUBFOOT.

143.	Barwell's Shoe, each	15.00
	Barwell's Shoe, per pair	30.00
144.	Shaffer's Lateral Screw	

FOR JOINT DISEASE.

145.	Holthouse's Extender	10.00
	Holthouse's Extender	15.00
146.	Shaffer's Knee Splint	

FRACTURE APPARATUS.

147.	Fox's Clavicle Splint	5.00
148.	Hamilton's Elbow Splint	
149.	Gutta Percha Splint, per lb.	3.00 to 4.00
150.	Mayor's Clavicle Apparatus	5.00
152.	T. & Co.'s Arm Sling	4.50
	Plain Arm Slings	3.50
153.	Clark's Olecranon Apparatus	5.00

FIG.	PART IV.	PRICE
	Clark's Olecranon Apparatus	$8.00
154.	Smith's Anterior Splint..........	2.00
155.	Shrimpton's Forceps	3.50
156.	Salt's Cradle....................	12.00
157.	Clark's Apparatus...............	30.00
158.	Morgan's Bed..................	
159.	Morgan's Bed..................	
160.	Munger's Rods..................	4.50
161.	Munger's Splint.................	6.00
162.	Depuytren's Fibula Splint.......	
163.	Harris' Apparatus...............	
164.	Wackerhagen's Splint...........	
165.	Wackerhagen's Shears...........	6.00
166.	Wackerhagen's Fixator..........	
167.	Rhode's Inclined Plane..........	
168.	Rhode's Fracture Bed..........	
	APPARATUS FOR FALSE JOINTS.	
170.	Smith's Artificial Femur.. 35.00 to 50.00	
171.	Smith's Artificial Tibia... 30.00 to 40.00	
172.	Smith's Artificial Humerus, 35.00 to 70.00	
173.	Smith's Artificial Forearm. 35.00 to 50.00	
	SUSPENSION APPARATUS, FOR HOSPITAL USE.	
174.	Buck's Suspension	18.00
	FOR JOINT DISEASE.	
175.	Sayre's Long Hip Splint.........	25.00
	Sayre's Long Hip Splint. 30.00 to 45.00	
	FOR DRY CUPPING.	
176.	Junod's Boot, small	15.00
	Junod's Boot, large.............	25.00
177.	Junod's Arm, small	15.00
	Junod's Arm, large.............	25.00
	FOR SECURING THE INSANE.	
178.	Straight Jacket	8.00
	Straight Jacket	10.00
	Straight Jacket	15.00
179.	Buckle........................	2.50
	Belt and Buckle	6.00
	FOR USE OF HOT WATER IN SURGERY.	
180.	Bath for Arm..................	13.00
181.	Bath for Leg	15.00
	FOR ALTERNATE APPLICATION OF DRY HEAT AND COLD.	
182.	Hamilton's Revulsor	8.00
	FOR EXTENSION.	
183.	Denison's Windlass	1.50
	FOR BLOODLESS OPERATIONS.	
184.	Esmarch's Tourniquet...........	3.75
	FOR APPLICATION OF COLD.	
185.	Spinal Ice Bag............	4.50

FIG.	PART IV.	PRICE
	Spinal Ice Bag................	$10.25
185*b*.	Turnbull's Ice Bag.............	2.50
	FOR JOINT DISEASES.	
186.	Andrew's Ankle Splint.	
187.	Andrew's Knee Splint...........	
188.	Andrew's Knee Splint..........	
189.	Sayre's Shears.................	7.00
190.	Andrew's Knee Instrument......	
191.	Andrew's Hip Splint...........	12.00
	FOR SPINAL CURVATURE.	
192.	Andrew's Spine Brace..........	20.00
193.	Sayre's Suspense, plain..........	8.00
	The same, double-hooked beam...	9.00
	The same, with brass pulleys.....	15.00
	Sayre's Tripod..................	10.00
	Cross-barred Muslin, per yard....	.22
	Seamless Shirt..................	2.50
	Seamless Shirt..................	3.50
194.	Sayre's Jury Mast..............	12.00
	KNEE AND ANKLE COMPRESSORS.	
195.	Sayre's Compressor, Knee	6.00
	Sayre's Compressor, Ankle	6.00
	FOR FRACTURE OF ARM AND HAND.	
196.	Coover's Splint	1.50
	FOR KNOCK-KNEE.	
197.	Trueheart's Brace for Knock-Knee	35.00
	FOR WRITER'S CRAMP.	
198.	Writer's Cramp Apparatus.......	10.00
199.	Writer's Cramp Apparatus.......	6.00
	FOR UMBILICAL AND ABDOMINAL HERNIA.	
200.	Walker's Supporter	12.00
	APPLIANCES.	
201.	Stillman's Ratchets .... (Send for pamphlet.)	
	Plaster Bandage Shears.	
202.	Szymanowsky's.................	9.00
203.	Brun's	10.00
204.	Esmarch's.....................	4.50
	Henry's (Fig. 111)..............	7.50
	Wackerhagen's (Fig. 165)........	6.00
	Sayre's (Fig. 189)..............	7.00
	FOR HERNIA, SEMINAL CORDS AND PILES.	
205.	Wood's Truss..................	
206.	Doisnot's Compress	4.00
207.	Mathieu's Pile Support..........	5.00
	Martin's Rubber Bandage.	
207*b*.	10 feet long, 3 inches wide.......	2.00

FIG.	PART IV.	PRICE
	Bulkley's Rubber Bandago.	
	12 feet long, 3 inches wide.......	
	CONTRACTED WRIST APPARATUS.	
208.	Contracted Wrist Apparatus.	20.00, 30.00
	SPINAL CURVATURE.	
209.	Spine Brace....................	40.00
210.	Spine Brace....................	40.00

FIG.	PART IV.	PRICE
	PATELLE SUPPORT.	
211.	Bacon's........................	
	Artificial Nose.	
213.	Artificial Nose, from... $50.00 to 125.00 according to workmanship.	
	Artificial Eye.	
214.	Artificial Eye..................	10.00

◆

Part V.

Tooth Forceps.

BEST, WARRANTED.

FIG.		PRICE
1.	Bayonet-shaped Wisdom..........	$2.75
2.	Lower Wisdom..................	2.75
3.	Bayonet-shaped Stump...........	2.75
4.	Upper Bicuspid..................	2.75
5.	Upper Molar, right..............	2.75
6.	Upper Molar, left................	2.75
7.	Upper Molar, Cowhorn, right.....	2.75
8.	Upper Molar, Cowhorn, left......	2.75
9.	Upper Molar, Cowhorn, either side,	2.75
10.	Upper Molar, right or left........	2.75
11.	Upper Molar, bayonet-shaped, left.	2.75
12.	Upper Molar, bayonet-shaped, right,	2.75
13.	Harris' Upper Molar, left.........	2.75
14.	Harris' Upper Molar, right........	2.75
15.	Harris' Lower Molar, right........	2.75
16.	Harris' Lower Molar, left.........	2.75
17.	Harris' Lower Molar, either side...	2.75
18.	Cowhorn Lower Molar, right......	2.75
19.	Cowhorn Lower Molar, left.......	2.75
20.	Cowhorn Molar, either side.......	2.75
21.	Harris' Lower Molar, right........	2.75
22.	Harris' Lower Molar, left.........	2.75
23.	Harris' Lower Molar, either side...	2.75
24.	Wolverton's Lower Molar, either side	2.75
25.	Wolverton's Upper Bicuspids.....	2.75
26.	Wolverton's Lower Bicuspids.....	2.75
27.	Wolverton's Lower Root, left.....	2.75
28.	Wolverton's Lower Root, right....	2.75
29.	Universal Root..................	2.75
30.	Straight Root....................	2.75
31.	Lower Root, bent handles.........	2.75
32.	Straight Root, narrow............	2.75
33.	Half-Curved Root................	2.75
34.	Full-Curved Root................	2.75
35.	Narrow-Beak Root, bent handles..	2.75
36.	Narrow-Beak Root, straight......	2.75
37.	Narrow-Beak Root, half-curve....	2.75
38.	Narrow-Beak Root, full-curve.....	2.75
39.	Narrow-Beak Root, bayonet-shape.	$2.75
40.	Narrow-Beak Root, right.........	2.75
41.	Narrow-Beak Root, left...........	2.75
42.	Universal.......................	2.75
43.	Universal Root, narrow beak......	2.75
44.	Parmly's Straight................	2.75
45.	Parmly's Half-Curved............	2.75
46.	Parmly's Full-Curved............	2.75
47.	Parmly's Bayonet-shaped.........	2.75
48.	Parmly's, left....................	2.75
49.	Parmly's, right..................	2.75
50.	Straight Excising................	2.75
51.	Curved Excising.................	2.75
52.	Splitting........................	2.75
53.	Elevating.......................	2.75
54.	Single-Jointed, Straight or Curved.	1.25
55.	Goodwillie's Upper Molar, warranted	2.75
56.	Goodwillie's Spicula, warranted...	2.75
57.	Goodwillie's Root and Children's..	2.75
58.	Goodwillie's Splitting, warranted..	2.75
59.	Third quality, double-jointed.....	1.50
60.	Goodwillie's Bicuspids, warranted.	2.75
61.	Single-Jointed, Curved or Straight.	1.25
62.	Goodwillie's Half-Curved, warranted	2.75
63.	Goodwillie's Straight, warranted..	2.75
	Second quality, of above patterns..	2.00
	Also Tooth Forceps at 1.50,	1.25
	(See Figs. 54, 59 and 61.)	

Turn Keys.

FIG.		PRICE
64.	Spring Bolt Turn Key............	3.00
65.	Spring Bolt Turn Key, double-eye hooks........................	3.00
66.	Turn Key, with removable fulcrum,	2.50
67.	Turn Key, with rotating fulcrum..	2.50

Root Extractors and Gum Lancets.

FIG.		PRICE
68.	Stag Foot Elevator..............	1.00
69.	Screw Elevator..................	1.00
70.	Root Extractor..................	1.00

FIG.	PART V.	PRICE
71.	Root Extractor	$1.00
72.	Gum Lancet	1.00
73.	Curved Root Extractor	1.00
74.	Angular Root Extractor	1.00
75.	Gum Lancet, tortoise-shell handle, with spring catch	2.00
	The same, slide-catch	2.00
	The same, without catch	1.00

Staphylorrhaphy Instruments.

UP DE GRAFF'S STAPHYLORRHAPHY CASE.

FIG.	PART V.	PRICE
76.	Curved Bistoury	2.00
77.	Curved Needle	2.00
78.	Blunt Hook	2.00
79.	Bent Needle	2.00
	Figs. 76, 77, 78, 79, put up in a neat case	9.00

Dermatological Instruments.

FIG.	PART V.	PRICE
80.	Nævus Needle	.75
81.	Piffard's Comedone Extractor	1.00
82.	Piffard's Irido Platinum Needle	1.00
83.	Piffard's Milium Needle	1.25
84.	Piffard's Scarifying Spud	1.25
85.	Piffard's Epilating Forceps	1.50
86.	Piffard's Grappling Forceps	3.00
87.	Skin Grafting Scissors	6.50
88.	Piffard's Cutisector	5.00
89.	Piffard's Sharp Spoon, each	2.25
90.	Hess' Glass Pleximeter	.50

SEE ALSO:

(Henry's Depilating Forceps, page 46, Part III.)

(Platina Caustic Cups, Fig. 309, Part III.)

(Fine Scissors, Figs. 110, 111, Part II.)

(Scalpels, pages 6, 46, Part I.)

(Microscopic Instruments, page 90, Part I.)

(Counter Irritants, page 66, Part I.)

(Vaccinating Instruments, page 66, Part I.)

(Hypodermic Syringes, page 79, Part I.)

Nail and Corn Instruments.

FIG.	PART V.	PRICE
91.	Spring, for Inverted Nails	$0.25
92.	Nail Nippers	2.50
93.	Nail-extracting Forceps	2.50
94.	Corn Knife and File	.75
95.	Van Buren's Sequestrum Forceps,	3.00
	Van Buren's Sequestrum Forceps,	2.50
96.	Nail Cleaner and File	.35
97.	Pocket Case Scalpel	1.00
98.	Dissecting Scalpel	.60 to .75
99.	Splinter Forceps	1.00
100.	Corn Knife, spring handle	1.00

Sundries.

GYNÆCOLOGICAL.

FIG.	PART V.	PRICE
101.	Emmett's Counter-pressure Hook	1.25
102.	Emmett's Enucleator	1.50
103.	Emmett's Needle Forceps	3.00
104.	Emmett's Double Tenaculum	5.00
105.	Emmett's Curette Forceps	3.50
106.	Wallace's Spring Tent	.75
107.	Bozeman's Perineal Elevator	5.50
108.	Uterine Dressing Forceps, slide-catch	2.75
109.	Emmett's Twisting Forceps	4.00
110.	Emmett's Sponge Dilator	2.50
111.	Emmett's Uterine Tourniquet	
112.	Emmett's Cystitis Eyelet	.25
113.	Bache Emmett's Fistula Tube	.30
114.	Stimson's Needle & Cutting Forceps	3.50
115.	King's Pelvimeter	4.00

TRACHEAL.

FIG.	PART V.	PRICE
116.	Minor's Trachea Retractors	4.50
117.	Brown's Pessary, hard rubber	.50
	Brown's Pessary, soft rubber	.75

◆

Supplement.

FIG.	SUPPLEMENT.	PRICE
1.	Newman's Obstetrical Forceps	$7.00
2.	Bank's Urethrotome	20.00
3.	Sawyer's Obstetrical Forceps	7.00
4.	Milne's Urethrotome	17.00
5.	Wight's Cautery	11.00
6.	Bill's Arrow Extractor	2.50
7.	Hank's Tenaculum Forceps	3.00
8.	Reese's Leech	$4.50
9.	Adams' Subcutaneous Section Knife	1.50
10.	Adams' Large Saw	4.00
11.	Adams' Small Saw	3.00
12.	Adams' Rhinoplastos	3.00
13.	Bridge's Nasal Douche	.60
14.	Bridge's Auto-Insufflator	.75

FIG.	SUPPLEMENT.	PRICE
15.	Schuyler's Speculum	$12.00
16.	Woodward's Pessary, No. 1	1.25
	Woodward's Pessary, No. 2	1.25
17.	Thompson's Ecraseur	25.00
18.	Stanford's Probang	2.50
19.	Hoff's Automatic Suture	5.50
20.	Russian Needle-Holder	4.00
21.	Hank's Tracheotome	9.00
22.	Hank's Antiseptic Atomizer	15.00
23.	Sexton's Insufflator	2.00
24.	Stohlmann's Bead Saw	6.00
25.	Ryerson's Vectis	5.00
26.	Wales' Rectal Dilator	1.50 to 3.50
	Wales' Explorer, No. 3	2.00
	Wales' Irrigator, No. 5	3.50
27.	Thomas' Tumor Scoop	3.50
28.	Patent Thermometer	3.50
29.	Fitch's Wire Twister	4.00
30.	Otis' Prostatic Guide	1.00
31.	Holden's Resonator	2.50
32.	Munson's Model	9.00
33.	Prince's Staphylorrhaphy Needle	10.00
34.	Hutchison's Lithotome	8.00
35.	Allis' Herniatome	7.00
36.	Sussdorf's Tupelo Tents, hollow, per doz	3.00
	The same, solid, per doz	2.00
37.	Kinloch's Urethrotome	25.00
38.	Patent Velvet Eye Catheter	.75
39	Burrall's Atomizer	1.50
40.	Fryer's Sims' Speculum	2.00
41.	Steurer's Dilator	8.00
	Cold Sound, silver	4.00
	Cold Sound, soft rubber	2.50
42.	Plaster Paris Spreader	5.00
43.	Apparitor Auris, per pair	6.00
44.	Tarnier's Obstetric Forceps	24.00
45.	Ball's Uterine Dilator	10.00
46.	Cleborne's Tenaculum, &c.	7.00
47.	Fitch's Handy Aspirator	5.00
48.	Wood's Torticollis Apparatus	5.00
49.	Weir's Antiseptic Atomizer	15.00
50.	(Hypodermic Syringes, see List, Fig. 213, &c., Part I.)	
51.	Theobald's Probes	4.00
52.	Weir's Mouth Gag	7.00
53.	George's Inhaler	3.50
54.	Sand's Needle-Holder, improved	4.50
55.	Yarrow's Enucleator	4.00
56.	Bates' Psychrophor	4.00
57.	Bigelow's Evacuator	12.00
	Bigelow's Evacuator, with Stand	15.00

FIG.	SUPPLEMENT.	PRICE
58.	Bigelow's Lithotrite	$40.00
59.	Skene's Endoscope	2.75
60.	Bates' Urethrotome	15.00
61.	Skene's Reflux Catheter	2.50
62.	Skene's Double Perforated Catheter	2.00
63.	Skene's Self-retaining Catheter	2.00
64.	Bigelow's Artery Forceps	3.50
65.	Skene's Cystocele Pessary	2.00
66.	Otis' Perineal Tourniquet	5.50
67.	Bozeman's Vaginal Support	2.00
68.	Weir's Urethrameter	18.00
69.	Carroll's Retroflexion Pessary	.75
70.	Hank's Throat Spray, each	1.00
71.	Gross' Urethrameter	20.00
72.	Gross' Urethrotome	6.00
73.	Gross' Urethral Dilator	14.00
74.	Currie's Double Canulated Needle.	7.00
75.	Pritchett's Urethrotome	25.00
76.	Hank's Rapid Uterine Dilators	5.50
77.	Coleman's Pessary	.40
78.	Hunter's Divulsor and Urethrotome	32.00
79.	Hunter's Urethral Tourniquet	5.50
80.	Hunter's Filamentous Wedge, each,	.75
81.	Stearn's Dilating Urethrotome	12.00
82.	Fowler's Bow Pessary	3.00
83.	Shaffer's Clubfoot Shoe	10.00
	Shaffer's Clubfoot Shoe	12.00
84.	Shaffer's Ankle Splint	6.00
	Shaffer's Ankle Splint	8.00
85.	Shaffer's Head Rest	
86.	Shaffer's Spine Brace	10.00
87.	Shrady's Subcutaneous Saw	7.00
88.	Cleborne's Double Forceps	3.50
89.	Biart's Speculum Vaginæ	20.00
90.	Politzer's Uniform Acoumeter	3.50
91.	Marsh's Respirometer	10.00
92.	Fryer's Sims' Speculum and Attachments	11.00
93.	Leonard's Uterometric Sound	3.25
94*a*, *b*, *c*, *d*.	HUTCHISON'S APPARATUS FOR TREATING HIP-, KNEE- & ANKLE-JOINT DISEASE	
94*a*.	Crutches, per pair	3.00 to 12.00
94*b*.	Leg Extension	6.00 to 7.00
94*c*.	Hatters' Board, for Splinting, per yd.	4.00
94*d*.	Roller Bandage, per pound	1.50
95*a*.	Stillman's Knee Brace	30.00
95*b*, *c*.	Stillman's Bracket for Knee-Joint,	9.00
96.	Schweig's Stricture Dilator	10.00
97.	Lincoln's Cautery Electrode	20.00
98.	Skene's Uterine Sector	10.00

Emmett's Set of Instruments for Vesico-Vaginal Fistula.

1 Sims' Hospital Speculum.
1 Sims' Virgin Speculum.
1 Emmett's Depressor.
1 Emmett's Sponge Holder.
1 Sims' Catheter, soft metal.
1 Emmett's Uterotome.
2 Emmett's Tenacula.
1 Perry's Tenaculum.
6 Emmett's Scissors.
1 Emmett's Wire Pressing Forceps.
2 Bistouries.
1 Scalpel.
1 Emmett's Needle Forceps.
1 Emmett's Dressing Forceps.
1 Emmett's Wire Twisting Forceps.
1 Sims' Blunt Hook.
1 Sims' Shield.
1 Sims' Wire Carrier.
1 Coil Silver Wire.
1 Doz. Emmett's Needles.

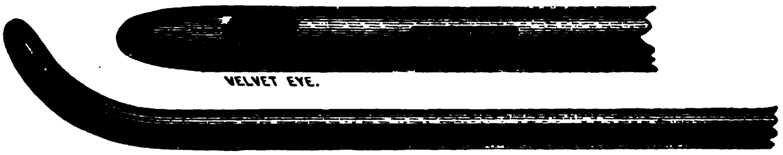
In a three-fold morocco case lined with chamois—red or drab. In the middle compartment are placed the scissors and other instruments which would be injured by being twisted in the rolling or folding of the case. Beneath these is space for the speculum and sponge holders.. **$80.00**

Geo. Tiemann & Co.'s Velvet Eye Catheter.

There are three varieties of soft rubber catheters in the market. The French, known as Nélaton's, the English, called Jaques', and Tiemann's.

The eyes of the French and English catheters are punched, leaving the edges sharply defined, which causes irritation and pain on introduction, whereas those of our make can do no possible injury, and are more durable because there is no cut surface to be acted upon by the urine.

Patented June 12th, 1877.



(*Extract from "The Medical Advance," January*, 1879.)

This catheter (see cut above) is one recently introduced to the profession by Messrs. GEORGE TIEMANN & CO., of New York.

The chief excellence of this catheter is, that the eyes are *perfectly smooth*, hence its name, "velvet-eyed," in contradistinction to the English and French make, which have their eyes punched out, thus giving square cut edges to the opening. Sometimes an irritated bladder that shuts down tightly upon the end of a catheter will force some folds of the granular mucous membrane into the eyes, thus making it painful and hard to withdraw. Villous masses, springing from the bladder, are sometimes caught in the eyes of the catheters generally used, and it would seem that these smooth-eyed catheters would avoid this entirely.

In enlarged prostates, no catheter is so easy of introduction as the "flexible," and none less irritating to the bladder. These, with the guide of Dr. Otis, just described, will be of great use to the country practitioner, especially in relieving victims of an enlarged prostate.

Price.—Tiemann's Velvet-eyed Catheter, marked with both American and English Numbers	**$0.75**

We also have in stock:

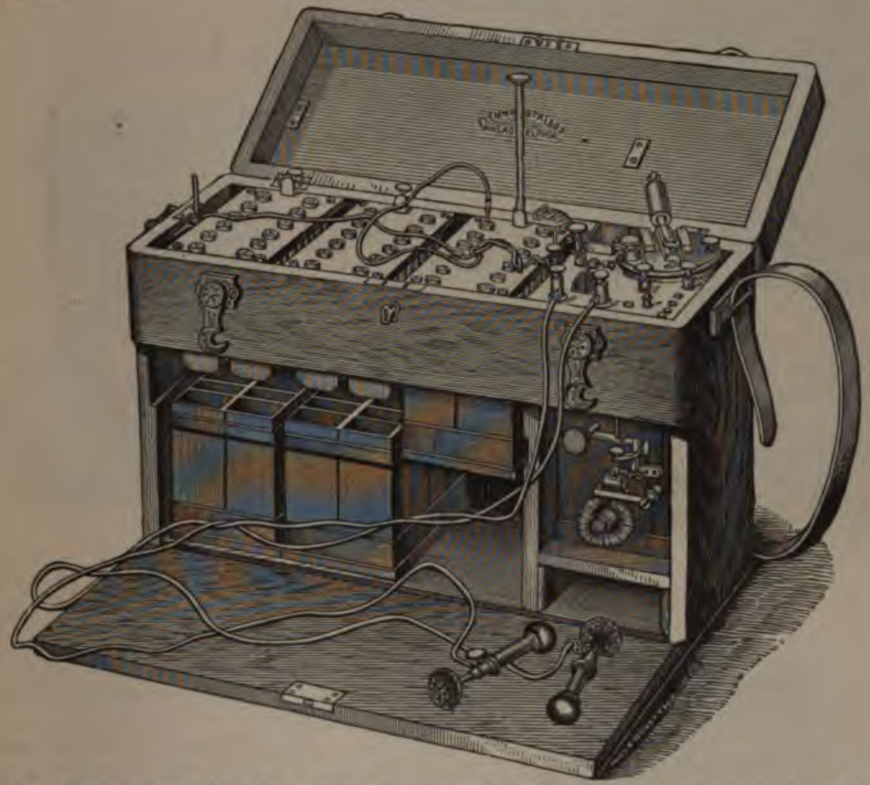
Jaques', marked with English Numbers	**.75**
Nélatons, marked with French Numbers	**.50**

(N. B.—A card scale with American and French Catheter and Bougie Guage and Measure, metrical and in inches, will be mailed on application.)

ELECTRO-MEDICAL APPARATUS.

Constant Current Batteries.

Having made arrangements with Messrs. FLEMMING & TALBOT to act as special agents for the sale of their Electro-Medical Batteries and Instruments, we desire to call the attention of the profession to their apparatus, the principal ones being illustrated and briefly described herewith.

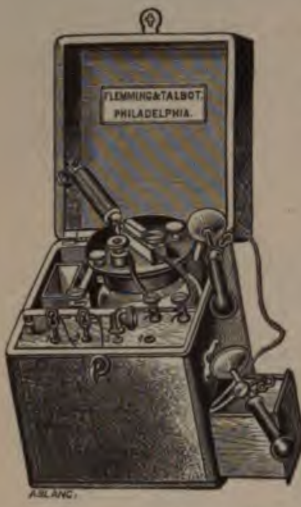


The different sizes, from 10 to 60 cells, are so made in sections of 10 cells each that any one section, or any number of sections can be used independently of the others, or all used together. The elements are zinc and carbon; the fluid, bi-chromate of potassium, and the cells are hard rubber. Covering the cells, when not in action, is a hydrostat, or rubber-cushioned sliding board, which is pressed down tightly upon them when the lid is closed, thus preventing the fluid from spilling while being transported, or if by accident it should be upset. The cells can be taken out in front for re-charging, obviating the annoyance and risk of breakage in removing the plates on top. Connected with the binding posts for receiving the electrode cords is a commutator for reversing the polarity of the electrodes, or for interrupting the current by hand. On special orders, an "Automatic Rheotome," for interrupting the current, or a "Galvanoscope," for showing the state of the current, is attached.

The walnut cases of these batteries are highly polished, and all the metallic parts finely nickel plated.

Price of 10 cell Battery	**$25.00**
20 cell Battery	**45.00**
30 cell Battery	**65.00**
40 cell Battery	**80.00**
Price of 60 cell Battery	**$100.00**
Automatic Rheotome	**10.00**
Galvanoscope	**5.00**

No. 1. Faradic Current Battery.

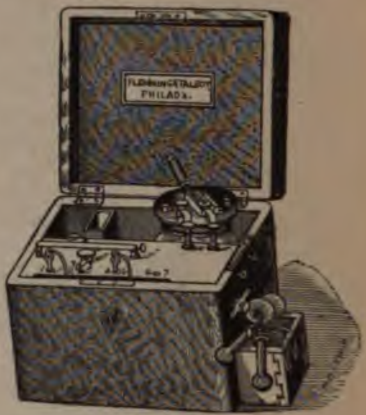

FLEMMING&TALBOT.
PHILADELPHIA.
A.BLANC.

This Battery is intended chiefly for the use of physicians in making their daily visits, for purposes of diagnosis, or in treating simple cases where the Faradic current is required.

It is in a neat morocco case, 6x6x7½ inches, and weighs, when charged, only five pounds.

Price, $15.00.

No. 2. Faradic Battery.

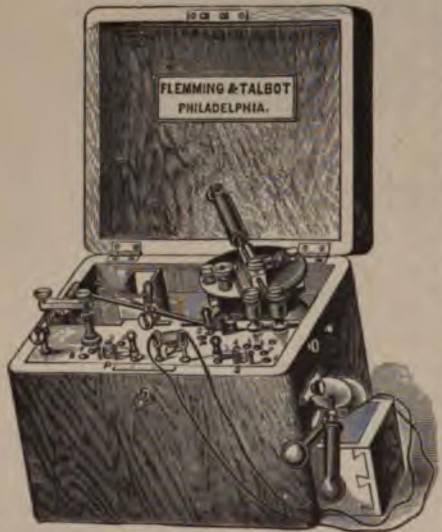


A little larger and more powerful than No. 1, and with the addition of a commutator for reversing the polarity of the electrodes during application. It is sufficiently powerful for nearly all cases where the Faradic current is required, though for a physician in general practice we would recommend the more complete and powerful No. 3.

Put up in a polished walnut case, metallic work nickel plated.

Price, $20.00.

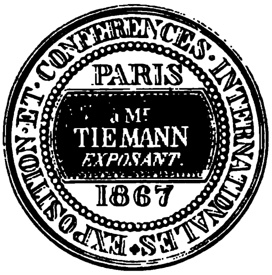
No. 3. Faradic Battery.



This Battery is provided with a slow and a rapid rheotome, or current interrupter; a commutator, or polarity changer; scales, by which the primary and secondary currents may be graduated to the utmost delicacy or the greatest power; and with our new patent galvanic cell. This cell, which is charged with a solution of bi-chromate of potash, is so made that when not in action the zinc is taken out of it altogether and placed in a vulcanite cell provided for the purpose. The aperture through which it passes is covered by a rubber hydrostat, making the cell perfectly fluid tight, and saving both the fluid and the zinc from the effect of splashing in transportation, or of immersion in case of upsetting. By this plan, also, the cell can be filled nearly to the top and the zinc be made twice the usual length; it will thus produce a stronger current, and last a longer time.

It is enclosed in a handsome walnut case, 7½x7½x8½ inches, has all its metallic parts finely nickel plated, and weighs, when charged, ten pounds.

Price, $30.00.



TWO SILVER MEDALS AND ONE BRONZE MEDAL

AT

INTERNATIONAL EXHIBITION, PARIS, 1867.

Parties wishing our instruments and finding it more convenient to obtain them through dealers, are requested to order "**Tiemann's manufacture,**" as otherwise inferior goods are sometimes substituted.

TWO SILVER MEDALS

AWARDED BY THE

PARIS EXPOSITION OF 1867.

Being the only Silver Medals granted to American Exhibitors of Surgical Instruments.

EXPOSITION UNIVERSELLE DE MDCCCLXVII A PARIS
C. TIEMANN
& Co
RECOMPENSES

Parties wishing our instruments and finding it more convenient to obtain them through dealers, are requested to order "Tiemann's manufacture," as otherwise inferior goods are sometimes substituted.

EXTRACT FROM GENERAL REPORT OF THE JUDGES OF GROUP XXIV

INTERNATIONAL EXHIBITION, 1876.

"The largest collection of instruments was exhibited by Messrs. TIEMANN & Co., of New York. It embraced almost every instrument used by the surgeon in general or special practice, and some, entirely new. In material, workmanship, and exquisite finish, they could not be excelled. They were complete in minute detail so essential to the formation of a perfect instrument, and gave evidence of scrupulous care and nice appreciation of the wants of the surgeon."

JUDGES REPORT ON THERMOMETERS AND GALVANO-CAUSTIC APPARATUS.

"Commended for excellent construction, workmanship, and applicability of Clinical Thermometers and Dawson's Galvano-Caustic Apparatus."

"The most complete Battery presented for competition, was one exhibited by TIEMANN & Co., invented by Dr. Dawson."

TWO FIRST MEDALS AND HONORABLE MENTION

AT

SANTIAGO, CHILI, 1875.

Parties wishing our instruments and finding it more convenient to obtain them through dealers, are requested to order **"Tiemann's manufacture,"** as otherwise inferior goods are sometimes substituted.

3 2044 014 413 066

The borrower must return this item on or before the last date stamped below. If another user places a recall for this item, the borrower will be notified of the need for an earlier return.

*Non-receipt of overdue notices does **not** exempt the borrower from overdue fines.*

Harvard College Widener Library
Cambridge, MA 02138 617-495-2413

WIDENER
FEB 1 0 2005
BOOK DUE

Please handle with care.
Thank you for helping to preserve library collections at Harvard.